The stability and fragility of fairness: How individual concerns for justice affect human perception, emotion, and behavior

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Diplom-Volkswirt Sebastian Lotz

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Köln

Referent: Prof. Dr. Detlef Fetchenhauer, Universität zu Köln

Korreferent: Prof. Dr. David Dunning, Cornell University, USA

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1. Preface and acknowledgment

Justice is a central issue in people's lives. In many settings, such as our families, our workplace, or our civic systems, justice is a main concern for us. The broad interest of humans in justice is also a reason, why many different branches of the arts and sciences deal with justice related topics. For example, philosophers give us a hint what is just and what is not. Psychologists investigate how people perceive and think about justice. When we observe societies at large, sociologists also share a substantial interest in the area. Even branches of research with traditionally a rare interest in the topic, such as business administration, increasingly care about justice and its effects.

What is puzzling me when I look at justice and fairness is that fairness seems to be paradoxically stable in many domains, but rather fragile in other. For example, managers commit tax fraud while donating significant amounts of money to charity. Further, people have surprisingly little problems stealing a pen from the office but would never dare to take an equivalent amount of money from a cash register. Finally, people download music and movies off the Internet yet without acknowledging the act as stealing. Analyzing effects of the stability and fragility of fairness is thus an important attempt to understand human behavior.

In this dissertation, which is psychological in its nature, a view of several facets of justice is taken. Owed to the fruitfulness of interdisciplinary conduct, I apply different methods from different specialization in psychology in order to gain a better understanding of the complex topic of justice. The methods include experimental games commonly used in experimental and behavioral economics as well as social psychology. Further, some experiments are embedded into a consumer psychological context. Some qualitative measures are used to gain insight into emotions underlying justice concerns. Finally and most importantly, individual differences in justice

perception and behavior are investigated using people's differences in their justice sensitivity (more on that follows later).

The modern demands of scientific training are not only the writing of a doctoral dissertation but also an early presence in the "scientific community". Researchers are as early as in their doctoral training confronted with the international competition about publications in internationally renowned journals. Since space in such journals is immensely scarce and it usually takes several attempts to successfully publish in such, "wasting" expensive datasets solely for the sake of a dissertation is, unfortunately, not an option. In this respect, this dissertation is no exclusion. Hence, many of the topics discussed in this dissertation are based on research, which has been submitted for publication to peer-reviewed journals. Whenever papers based on research presented here are currently being reviewed a footnote will tell that.

Also, science is rarely done alone. One mind is seldom sufficient to address today problems – be they scientific or from the real world. Thus, I have relied on the help of many. Even though their help was significant at all points of research and writing, all mistakes remain entirely my own. My deepest appreciation goes to many:

Above all, I thank Professor Doctor Detlef Fetchenhauer for his continuous efforts in supervising and funding this thesis and my research, for raising my interest in psychology, and for his uncountable attempts to turn me into a psychologist by heart – he may finally have succeeded. I thank Doctor Thomas Schlösser for his mentorship both professionally and personally. Without our intellectual debates and especially his outstanding intellectual precision and skepticism, this dissertation would not have been anywhere near its current state. I thank Professor Doctor Dave Dunning of Cornell University for co-supervising this thesis. Especially the participation in one of his seminars (i.e. Self and Self-Insight) taught me important lessons about me and also deepened my

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As you will later see virtually hundreds of participants volunteered to participate in my studies. Under no circumstances would it have been possible to recruit all of them by myself. Thus, I thank all participants of my seminars and diploma thesis-students for their extraordinary efforts in the data collection. Of course, thanks to all voluntary study participants.

My deepest thanks, however, go to my family, my father Wolfgang, my mother Iris, and my brother Tobias who supported my thesis in a best imaginable way. Finally, my deep thanks go to

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In the summer of 2010

Sebastian Lotz

2. Introduction

A society regulated by a public sense of justice is inherently stable.

JOHN RAWLS – A THEORY OF JUSTICE

Justice concerns are prevalent in much of our every day concerns. In all kinds of surroundings, justice is a major guiding principle of human action. When we raise our kids we make sure to apply the same rules to each child. When we think about sharing something we aim at a fair way that makes everyone happy. Even in business life, increasing efforts are made to move away from mere selfish concerns to more fairness. Examples of the latter include fair wages, fair trade, or fair procedures in recruitment.

Matters of human concern about justice are also in the interest of scientists. The earliest scientific work in the area of justice has been addressed back in antique times. In his major work called *Nicomachian Ethics*, Aristotle addressed the topic and remained influential up to today. His works – as the works of other philosophers – are normative in their nature meaning that they *reflect* human behavior, perception and judgment. This is one important aspect to an understanding of justice. Yet the derivation of objective standards of justice is still continuing as modern philosophers add to our understanding of the topic (e.g. Rawls, 1971). Essential to philosophical theorizing is that philosophers derive *what* is just or fair.

Another important branch of justice research is *how* people perceive, judge and behave in justice-related issues. This is the key enquiry of psychological science, which is descriptive in nature. Hence, it is not spent much thought about whether something is or is not fair *objectively*, but rather how people think and feel about the issue (the next sub-chapter includes a more detailed analysis of the psychology of justice).

Outside the realms of objectivity, however, subjective thoughts, feelings, and reactions towards injustices or other justice-related issues might differ substantially among individuals. Illustrating individual differences is best shown by an example introducing two characters well known to many readers – one is fictional and one is authentic. Edmond Dantés is the main character of Alexandre Dumas' famous work *The Count of Monte Cristo*. Despite his innocence, Dantés is charged with treason and wrongly imprisoned on Chateau d'If, an island off the coast of Marseilles, France on the eve of his wedding-day. After serving 14 years in prison he escapes. Ultimately, outraged and motivated by desires of justice and – more specifically- revenge, he starts a crusade against the people responsible and behind his imprisonment. In the eyes of Dantés, revenge and justice seeking are equivalent and thus, he believes to do what needs to be done to re-establish justice. Somehow similarly and yet quite contrarily, Nelson Mandela, South-Africa's pioneer in the Anti-Apartheid movement, also served more than two decades in prison, much of it on Robben Island off the coast of Cape Town, South Africa. In contrast to Dumas' character Edmond Dantés, Mandela retained from revenge after his release and built a new nation based on his chosen justice-response – forgiving. Revenge and forgiving are thus very distinct reactions to a very similar transgression and yet this similar transgression might lead to very different behaviors and outcomes affecting as much as the creation of an entire nation. While, certainly, many outside influences impacted the distinct behaviors of the two, even the most skeptical reader has to agree that at least some of the difference might lie in the different personalities of Edmont Dantés and Nelson Mandela.

And in a nutshell, this is what this dissertation addresses. How do individual differences in justice-related personality traits affect subsequent perception, emotional experience, and behavior? More specifically, the main empirical enquiry is in people's decision making as well as the underlying psychological processes around such

issues. While at first, the focus is on people's decision to be fair or selfish (second-party justice) the focus later switches to situations where people are confronted with unfairness and have to decide if they are willing to engage to resolve the unfairness and thus re-establish justice at own expenses (third-party justice). While this dissertation only includes laboratory experiments and studies, the experimental situations typically reflect real-life situations in different contexts such as charitable giving or social courage. Finally, the topic of justice is applied to a consumer-research setting and it is shown, how in an applied setting of justice so called Fair Trade products affect people's judgment about the product, teaching a lesson how justice concerns subtly influence people in general.

2.1. The psychology of justice

Psychology is interested in the naïve human understanding of justice (Schmitt, Baumert, Fetchenhauer, Gollwitzer, Rothmund, & Schlösser, 2009). This interest is transported in research addressing identification of conditions, which people regard as just as well as cognitive and emotional reactions to suffered or observed injustice (Montada, 1994, Carlsmith & Darley, 2008). Further, the question of how people restore justice (see for example, Okimoto, Feather, & Wenzel, 2009; Okimoto & Wenzel, 2008) as well as how people cope with un-changeable injustices is of major importance in psychological research (Lerner, 1977). Reviewing decades of psychological research in justice leads to the notification of four influential psychological theories of justice, which serve as a wide basis for much psychological research in social justice (Schmitt et al., 2009).

First, the theory of relative deprivation (Stouffer, Suchman, DeVinney, Star, & Williams, 1949) argues that people regard an issue as fair if it is in line with expectations based on their claims. Relative deprivation theory is particularly influential in social issues such as development aid. It is the theoretical underpinning of concepts such as relative vs. absolute poverty – both measures of political decision-

making. Second, equity theory (Adams, 1965) describes fairness as the congruence of inputs and outputs among individuals. Accordingly, people judge a distribution as fair if the shares reflect the effort each recipient invested in the object of distribution. The concept is commonly applied in socio-economic backgrounds such as the determination of wages, societal burdens or benefits. Third, the "just world" research (Lerner, 1977) dealt with situations, which are simply not changeable, thus primarily addressing how individuals cope with such non-ideal situations of – potentially extreme – injustice. Fourth, procedural justice theory (Thibaut & Walker, 1975) showed how not only outcomes but also how they are reached is of major importance. As long as procedures are fair it is much easier to cope with resulting unjust outcomes. Drawing from these four theories, the psychology of justice has delivered influential insights in virtual all kinds of life (Schmitt et al., 2009).

What the majority of works in the area of social justice shares is the nature of a general psychological approach. Rather than accounting for individual differences these works aimed to answer the important question, what people in general feel, think, and do about justice or injustice. Not accounting for individual differences, however, has raised a substantial amount of critique (e.g. Major & Deaux, 1982, Colquitt, Scott, Judge, & Shaw, 2006). As virtually all of human behavior is, at least partly, determined by personality, there is no argument that the area of justice should be an exclusion. The earlier example of how differently Edmond Dantés and Nelson Mandela coped with similar situations reflects that. In research, the belief in a just world (Dalbert, Montada, & Schmitt, 1987), preferences for distributional principles (Davey, Bobocel, Hing, & Zanna, 1999; Sabbagh, Dar, & Resh, 1994), as well as opinion about procedural justice (Schmitt & Dörffel, 1999) are only a few examples of how individual differences in justice can be incorporated (Schmitt et al., 2009). The focus of the present research, however, is on justice sensitivity (Schmitt, Baumert, Gollwitzer, & Maes, 2010; Schmitt,

Gollwitzer, Maes, & Arbach, 2005; Schmitt, Neumann, & Montada, 1995).

2.2. Individual differences in justice sensitivity

Justice sensitivity measures stable and consistent individual differences in the tendency to perceive injustices as well as in the tendency to respond to such (Huseman, Hatfield, & Miles, 1987; Lovas & Wolt, 2002). It consists of different indicators and is distinctive depending on the kind of involvement in an episode of injustice.

2.2.1. Indicators of Justice Sensitivity

Schmitt et al. (1995) suggest four indicators to measure individuals' justice sensitivity (see also, Schmitt et al., 2009). First, it is indicated by the frequency of experienced injustices. Justice sensitivity, as all concepts of sensitivity, depends on a threshold. The more sensitive a person is towards injustices the more injustices this person should perceive, recall, and report. For example, stealing a pen (worth 1 Euro) from the office versus stealing a 1-Euro coin from the cash register might be evaluated quite differently depending on one's justice sensitivity. While stealing money is probably regarded a transgression by a vast majority of people, taking a pen might only be regarded wrong by people particularly with a lower justice-threshold.

Second, the intensity of affective valence to injustices has motivational foundations. The efficacy with respect to behavior results from anticipated and accompanying (moral) emotions. These can be either of positive or negative valences. In case of a suffered injustice the predominant emotion is anger (Mikula, Scherer, & Aethenstaedt, 1998, Törestad, 1990).

The mental intrusiveness of injustices is the third indicator. Rumination is the one of the most common side effects of emotional harmful experiences. Thoughts about these events typically automatically pop into people's minds. The strength and length of

this phenomenon depend on the subjective eminence of the event (Rime, Philippot, Boca, & Mesquita, 1992).

Last, behavioral reactions towards the perpetrator or the victim result from the psychological and social function of feelings towards injustices. Possible means of justice seeking can be punishment of the perpetrator, compensation of the victim, or retribution (see for example, Wenzel, Okimoto, Feather, & Platow, in press).

2.2.2. Perspectives of Justice Sensitivity

The fact that injustices can also be experienced from different perspectives is accounted for in the construct of justice sensitivity. Accordingly, justice sensitivity is measured from four different perspectives, capturing all possible ways of involvement in injustices: victim (JS_{victim}), perpetrator ($JS_{perpetrator}$), beneficiary ($JS_{beneficiary}$), and observer ($JS_{observer}$).[1] As such, the construct is not designed to measure general justice sensitivity, but rather justice sensitivity from the different perspectives with each facet consisting of a 10-item self-report scale. These four sub-dimensions of justice sensitivity, however, share some common variance commonly interpreted as reflecting general justice concerns (Gollwitzer, Schmitt, Schalke, Maes, & Baer, 2005). Further, $JS_{perpetrator}$, $JS_{beneficiary}$, and $JS_{observer}$ involve genuinely other-regarding justice concerns and have been found to correlate with prosocial personality traits such as empathy, social responsibility, and role taking. JS_{victim}, by contrast, seems to be a combination of justice-oriented as well as self-oriented concerns (Gollwitzer et al., 2005; Schmitt et al., 2005). It was found to correlate positively with rather anti-social measures such as Machiavellianism, jealousy, and vengeance (Schmitt et al., 2005).

[1] Until recently, justice sensitivity only captured three perspectives. The differentiation of beneficiary and perpetrator was establish to account for passive benefits versus active action (Schmitt et al., 2010). Beware of this when consulting other research (especially Fetchenhauer & Huang, 2004 and Gollwitzer et al., 2005)!

The four dimensions of justice sensitivity are distinct in the specific emotional and behavioral reaction towards injustices. While perpetrators and beneficiaries predominantly react with guilt, they are either willing to sacrifice own resources to restore justice or they punish themselves for the committed injustice. Observers predominantly respond with indignation and either compensate the victim or punish the perpetrator. Victims, finally, mainly experience anger and thrive for retaliation against the offender (Schmitt et al., 2009).

2.2.3. Justice Sensitivity in the context of experimental games

In order to judge the quality of a personality measure it has to show its predictive power in behavioral decision-tasks (Schmitt et al., 2009). Especially in the context of experimental games (e.g. Güth, Schmittberger, & Schwarze, 1982) this can be shown in highly controlled environments. The experiments conducted for this dissertation therefore augment prior findings. For example, Fetchenhauer & Huang (2004) provided first evidence that justice sensitivity predicts behavior in standard behavioral economic paradigms. In their study, prosocial justice sensitivity – justice sensitivity from the perspectives of perpetrators, beneficiaries and observers – was significantly associated to prosocial behavior in the dictator game, the ultimatum game, and a third-party punishment game. Victim-sensitivity, contrarily was not associated to prosocial behavior and sometimes even to antisocial behavior. Schlösser and Fetchenhauer (in preparation, cited in Schmitt et al., 2009) show, additionally, that justice sensitivity outperforms agreeableness of the five-factor-model (Borkenau & Ostendorf, 1993), social responsibility (Bierhoff, 2000), as well as moral identity (Aquino & Reed, 2002) in experimental games. Thus, it seems reasonable to rely on justice sensitivity to study individual differences in experimental games reflecting important social issues.

2.2.4. Prosocial justice sensitivity as predictor of fair behavior and willingness to confront unfairness

Drawing from the existing evidence of justice sensitivity as (better) predictor of prosocial behavior in experimental games, this dissertation addresses not only the predictive power but also its situational stability across experimental games reflecting social situations. The general hypothesis offered is that prosocial facets of justice sensitivity are related to prosocial behavior (i.e. in allocation decisions, third-party punishment, third-party compensation). Further, people high in prosocial justice sensitivity are rather immune to situational variation in their fairness concerns and actions. Further, reactions towards witnessed injustices are mediated by the emotional experience (e.g. moral outrage such as anger).

2.2.5. Victim-sensitivity as sensitivity towards other's mean intentions

This dissertation is foremost interested in shedding light on questions of prosocial behavior. Thus, prosocial justice sensitivity is of major importance. Victim-sensitivity, contrarily, is a satellite to this research, which however, has to be kept in mind when thinking about non-social behavior or even antisocial behavior. Thus, it is also important to understand the "other side" of injustices. Generally, it can be assumed that victims react heavily to (1) uncontrollable injustice and/or (2) mean intentions by others (Schmitt et al., 2009).

If the former were true, people high in JS_{victim} could use highly controllable situations (such as experimental games) in order to restore their "equity with the world" (Austin & Walster, 1975). If the latter were true, cognitions of suspicion in the sense of assumed mean intentions and the fear of exploitation could be the basis of anti-social action (Schmitt et al., 2009). Some evidence suggests that victim-sensitivity is indeed sensitivity to mean-intentions (Gollwitzer, 2005; Gollwitzer & Rothmund, 2010). However, the core empirical enquiry in the present context does not put subjects in the role of the

victim and thus, this detailed view on victim-sensitivity is ill-suited. Regarding prosocial behavior, victim-sensitivity is always expected to be non-related (i.e. technically uncorrelated) to behavior as well as emotional mediators, due to conflicting influences of genuine justice concerns and self-oriented concerns.

3. Overview of current research

Life includes a substantial amount of occasions where it is possible for us to behave in a way that serves our self-interest but not other's interests. Social scientists have been successful in showing conditions under which subjects behave prosocially or selfishly (e.g. Batson, 1994). Further, a substantial amount of research is devoted to discover how personality traits affect such prosocial behavior. Chapter 4 addresses person-situation interactions in order to examine prosocial behavior in economic games more holistically.

By employing three different versions of the standard dictator game it is shown that person-situation interactions can add to our understanding of prosocial behavior. The dictator game is a tool introduced by economists to study the degree of one's prosocial behavior. In a dictator game, a person (the *dictator*) is endowed with an amount of money. This amount can vary as desired by the researcher and the dictator's task is to anonymously divide the pot between him- or herself and another person (usually called the *receiver*). In the present context, I systematically varied the dictator game to address questions of potential behavioral confounds regarding the property rights of the initial endowment as well as the receiver's felt victimization and thus, his/her expectation. Besides the standard paradigm, I used two variations.

The first variation reversed the property rights (see also Oxoby & Spraggon, 2008) of the initial endowment – giving it to the receiver and enabling the dictator to take some or all money away. The second variation is designed to eliminate receiver's expectations (Dana, Cain, & Dawes, 2006). In it, I told dictators that their decision was highly

private because receivers expected to be in a lottery about the money with no information about chances. Leaving a dictator game without receiving anything is ostensibly less troubling if receivers do not know that they are a part of the game.

In total, I used these games to represent a function of games where it is sometimes easier to exploit (lottery game) and sometimes harder to exploit (reversed property rights game) the situation for selfishness' sake. With respect to purely outcome-based theory of social preferences (e.g. Bolton & Ockenfels, 2000, or Fehr & Schmidt, 1999) these games are totally equivalent as these preferences are presumably purely shaped by the size of the pie and nothing else.

The results show that for people genuinely interested in fairness, prosocial behavior remains stable across situations. For people not as genuinely interested in fairness, situations serve as a means to pursue self-interest showing how fragile fairness concerns sometimes are. The personality trait justice sensitivity (Schmitt et al., 1995, 2005, 2009, 2010) is employed to categorize peoples genuine concerns for justice.

The findings contribute to important issues in economic theorizing employing well-established insights from psychological research. A major concern is the current debates in economic theories about social utility. On the one hand, models of social preferences suggest stable preferences over outcomes in wide varieties of games. Contrarily, research shows that humans heavily use situational power to exploit some games for the sake of self-interest and are thus sensitive towards social psychological cues. By accounting for my suggested importance of person-situation interactions, I combine these two opposing streams of research and show how this puzzle can be jointly understood. Besides contributions to economic theorizing the insights can be applied to broader social contexts including not only allocation decisions but

also third-party interventions, coordination in social dilemmas as well as fraudulent behavior.

Chapter 5 augments the thoughts of Chapter 4 by directly addressing such third-party interventions. The key question is: Why do some people engage in costly bystander intervention against norm violations without any personal direct or indirect gains? The chapter investigates justice sensitivity and moral emotions as determinants of such altruistic punishment. I propose that the individual strength of other-directed justice concerns explains the willingness to altruistically punish wrongdoers. Moreover, I show that moral emotions provide the driving motivation and mediate the effect of justice sensitivity on altruistic punishment. Results of an experimental study show such a mediation effect for justice sensitivity from the beneficiary perspective, but not for observer and victim sensitivity. Further, the study investigates reasons for defaulted punishment. The results suggest that selfishness is not the only reason for not punishing. While people high in beneficiary- and observer-sensitivity rather argue based on moral reasons or admit to feel guilty for not engaging in altruistic punishment, people high in victim-sensitivity provide reasons mainly based on selfish concerns. Taken together, the study provides important insights in the motivations involved in altruistic punishment.

Chapter 6 continues the ideas given in Chapter 5. The almost exclusive focus on punishment and negligence of compensatory alternatives in studies involving experimental games may yield patterns that do not accurately reflect how and when people respond to injustice, particularly if punishment and compensation are not psychologically equivalent approaches to justice restoration. People's arguments in the previous chapter point this out. In Chapter 6, I examined participants' justice sensitivity as it predicted both their punitive and compensatory behaviors, while also exploring underlying emotional determinants and boundary conditions. Results

show that third-party desires to compensate victims of injustice were associated with inward-focused emotions such as anxiety and fear and were partly dependent on the victim's awareness of his/her victimization (varying the victim's felt consequences). In contrast, punishment of the offender was associated with outward-focused emotions such as moral outrage, and was stable regardless of transgression visibility. These findings are consistent with the understanding of punishment as a relatively deontological approach and compensation as a relatively more consequential approach to justice. Implications of these findings for understanding the broader range of justice responses and motives are also discussed.

Finally, empirical research in the context of the ethical label Fair Trade is addressed (Chapter 7). Rather than showing individual differences in justice contexts, it is explored what justice does in a situation reflecting real life. Psychological research has shown that much of perception is functioning as a top-down process. Prior experience or motivations thus shape perception in addition to bottom-up processes stemming from the perceived object itself. The chapter investigates in how far the concerns for justice can serve as this motive shaping perceptual preference and how consumer judgment might be influenced by a *what-is-fair-is-good* heuristics. In the case of ethical labeling (Fair Trade) high standards of justice in the supply chain are guaranteed. Two experiments involving the ratings of chocolate and coffee show consistently, how the mere exposure to the ethical label leads people to rate taste higher compared to situation where no label is shown.

4. What you don't know may hurt me – The effects of variations in justice sensitivity on allocation decisions[2]

4.1. Introduction

Prosocial behavior towards non-related persons is a research topic across many disciplines of science. Recently it has been shown how small situational variations can turn altruism on and off, for example, causing people to anonymously give but then immediately renege on their gift once the situational variable changes. The concern of this paper is whether or not these effects are due to a general phenomenon or rather driven by a few "black sheep" who heavily engage in such behavior while others behave altruistically no matter what the circumstances are.

To predict who the black sheep are, we suggest measuring individual differences in people's justice sensitivity (Schmitt, Gollwitzer, Maes, & Arbach, 2005; Schmitt, Neumann, & Montada, 1995) – these are stable and consistent differences in the in the tendency to perceive injustices and in the intensity of reactions towards those injustices. Schmitt et al. (1995) suggest that justice sensitivity is indicated by four elements: the frequency of experienced injustices, the intensity of emotional reactions towards injustices, the mental intrusiveness of injustices, and behavioral reactions to injustices. Furthermore, depending on one's role in an episode of injustice, different perspectives exist. These perspectives include perpetrator, beneficiary, and observer sensitivity (all being other-directed justice concerns, i.e. prosocial justice sensitivity) on the one hand and victim sensitivity (i.e., a combination of self-directed and other-directed justice concerns) on the other hand.

In prior research, justice sensitivity ("JS") has proven valuable as it organizes prosocial and antisocial behavior in scenario studies

[2] An article based on this chapter is currently under review. Coauthors are Thomas Schlösser, Daylian Cain, and Detlef Fetchenhauer.

(Gollwitzer, Schmitt, Schalke, Maes, & Baer, 2005) as well as experimental games (Fetchenhauer & Huang, 2004). Both types of studies provided evidence that prosocial JS is correlated to prosocial behavior while victim sensitivity is a mixture between genuine fairness concerns (justice for others) and the fear of being exploited (justice for the self); thus victim sensitivity is non-correlated with prosocial behavior.

Examining whether subsets of the population (e.g., people high in prosocial JS) are immune to effects of situational variation allows us to jointly study the effects of personality and situational variation as well as their interaction. This was traditionally covered by psychology as the "two psychologies" (see: Lewin, 1936; Cronbach, 1957), involving individual differences on the one hand and situational cues on the other hand, however nowadays research is augmented by the analysis of person-situation interactions (e.g. Bushman, 1995; Endler, 1997; Marusic & Eysenck, 2001; Schmitt, Eid, & Maes, 2003; Schmitt & Sabbagh, 2004, Skarlicki, Folger, & Tesluk, 1999). What the research shows is that usually both traits and situational cues somewhat influence behavior and, furthermore, their interactions are pivotal.

4.1.1. The dictator game and situational variations as a measure of prosocial behavior

The dictator game is a prototypical laboratory experiment showing the existence of prosocial behavior (Camerer, 2003; Forsythe, Horowitz, Savin, & Sefton, 1994; Guala & Mittone, in press). Person *A* is endowed with *x* dollars and his task is to determine a subset of those dollars, *y* (from zero to *x*), which is given to a person *B* in an anonymous, non-repetitive task which is supposed to completely eliminate strategic concerns and purely measures the degree of people's prosocial behavior. A key feature of the game is that if player *A* sends $0, player *B* gets nothing but is told about the game and that an anonymous dictator sent $0.

Recent evidence incorporating social psychological ideas find that slight variations of the game provide inconsistent results of dictator behavior. For example, Dana, Cain, and Dawes (2006) show that, while many dictators (persons *A*) give in dictator games, when surprised by the "Dictator Exit" option to renege on the gift, about half of the givers are willing to pay $1 to renege and leave the receiver with nothing, so long as the receiver is not told that a dictator game took place. This is what Dana et al. call "crossing the street to avoid the beggar." The notion is that we may give to a would-be recipient, but if the situation allows us to avoid the recipient unseen, we will take pains to avoid giving. Broberg, Ellingsen & Johannesson (2007) elicit reservation prices for exiting dictator games and find that that roughly two-thirds of participants are willing to accept less than 100 percent of the dictator endowment in order to opt out. Recent working papers have replicated this sorting out of altruistic situations (Lazear, Malmendier, & Weber, working paper; DellaVigna, List, & Malmendier, working paper); Cain and Dana (working paper) suggest that many givers would rather avoid the situations that trigger their own altruism and that a large portion of altruism is "reluctant."

Summarizing, researchers suggest that dictator giving thus does not only reflect preferences over financial outcomes but that "giving often reflects a desire not to violate other's expectations" (Dana et al., 2006, p. 193) as concluded from a willingness to pay to leave receivers in the dark what is actually going on. Specifically, less generous behavior is found as soon transparency between actions and outcome is reduced (Dana, Weber, & Kuang, 2007). Picking up after these findings, we explore three variations of the dictator game, examining how the interaction of personality traits and situational cues adds to our understanding of prosocial behavior. We argue that – in tendency – some people behave fair all the time while others use situational variations as excuses to pursue their material self-interest. We thus address the stability as well as the fragility of

fairness regarding its dependence on personality, situation, as well as the interaction between them.

4.1.2. Manipulation of Situation – Dictator Game Variations

As a benchmark, we employed a dictator game with an endowment of 6€ (just under $10 at the time). As will be explained, there are two additional variations where it is sometimes easier to exploit the situation for selfishness' sake (a lottery game) and sometimes harder (a reversed property rights game).

The first variation reversed the property rights of the initial endowment (Bardsley, 2008; see also Oxoby & Spraggon, 2008) – giving the endowment to the receiver and enabling the dictator to take some or all money away. The second (lottery) variation is designed to eliminate receiver's expectations (Dana et al., 2006); leaving a dictator game without receiving anything is ostensibly less troubling if receivers do not know that they are a part of a dictator game but rather assume that their payoff is due to (poor luck in a) lottery. Dictators anticipate this fact and they can choose a payoff, which is financially more harmful to the receivers but does not violate their expectations. In the game we told dictators that their decision was highly private as receivers expected to be in a lottery with a payoff between 0-6€ and no information of the probability distribution of various payoffs. Just based on financial outcomes, the games are equivalent – thus a stable preference for others would suggest that people claim equal amounts of money in all three variations of the game. Also, the wording about the giving question was simple and held constant in all cases.

4.1.3. Hypotheses

We generally hypothesize that high degrees of justice sensitivity (Schmitt et al., 2005) predict willingness to endow money independent of behavioral confounds of regular dictator games, i.e., regardless of which variation of dictator game is presented. We thus expect people high in prosocial justice sensitivity to have stable

fairness concerns, and these people are reluctant to keep money to themselves while others pursue their material self-interest whenever possible. Thus, justice sensitivity provides an organizing pattern as it classifies people into those to who is important that the recipient gets $\$x$ is important regardless of situational variations.

Specifically (hypothesis 1), we hypothesize the following pattern of behavior: First, we predict prosocial justice sensitivity (i.e., a composite scale of $JS_{perpetrator}$, $JS_{beneficiary}$, and $JS_{observer}$) to correspond to higher degrees of prosocial behavior. The higher participant's justice sensitivity, the higher their assignment of money is to person B, irrespective of the particular situation imposed by the variation of the dictator game. Second, the power of the various situations to give gets weaker with each variation. While in the taking-game pressure to give money to person B is strong, an anonymous dictator game is less strong, while the lottery game is least strong. Our manipulation of the situation is thus associated to prosocial behavior. As the game becomes stronger (lottery game via standard game to reverse property rights game), dictators increasingly leave more money to receivers (hypothesis 2). Finally, we predict interaction effects: While people high in prosocial justice sensitivity endow person B with equal amounts of money irrespective of the variation of the game, people low in prosocial justice slip through our situations and them to leave less money to the receivers (hypothesis 3). JS_{victim}, contrarily, is not expected to show any effects.

4.2. Method

4.2.1. Participants.

188 (94 dictators, 38 males) undergraduate students of the University of Cologne participated. They were aged between 19 and 35 years (M=23.83, SD=2.82).

4.2.2. Assessment of Justice Sensitivity.

Two weeks prior to measurements of behavior the justice sensitivity scales were used to measure $JS_{perpetrator}$ (α=.90), $JS_{beneficiary}$ (α=.90), $JS_{observer}$ (α=.88), and JS_{victim} (α=.85), with 10 items each (see appendix for items). We used a composite measure of the three prosocial facets forming $JS_{prosocial}$ (α=.89) and contrast that measure to JS_{victim}.

4.2.3. Dependent Measures.

All versions of the dictator game involved the opportunity to allocate an amount of 6€. Participants allocated that money by typing the preferred amount of money to Person *B* into a computer as well as physically fill and seal envelops that had "person *B*" written on them.

4.2.4. Experimental manipulations and procedure.

Dictators were randomly assigned to one of the three games. All dictators were guided into a one-person laboratory and worked through a computer-based questionnaire involving one version of the dictator game. Complete anonymity was guaranteed, as participants were not paid directly by the lab assistant; i.e., the experiment was double-blind. After participants finished working through the computer questionnaires and stuffed the envelopes, they stepped back into the room where the lab assistant was waiting. They were fared well taking their money home, which they decided not to give away. Study compensation thus was dependent on participant behavior. Later, receivers were recruited for a classroom experiment after a large lecture to receive the money.

4.3. Results

Descriptive statistics and inter-correlations can be found in Table 1. We first show the isolated effects of justice sensitivity (hypothesis 1), then turn to the isolated effects of the experimental

manipulation (hypothesis 2). Finally, we address interactions (hypothesis 3).

Table 1: *Means, standard deviations and intercorrelations of all variables*

	M (*SD*)	2.	3.	4.	5.
1. € given away	2.29 (1.26)	.37***	.31***	.22**	-.05
2. $JS_{perpetrator}$	3.28 (0.92)		.61***	.74***	.00
3. $JS_{beneficiary}$	2.39 (0.92)			.67***	.03
4. $JS_{observer}$	2.72 (0.81)				.39***
5. JS_{victim}	3.00 (0.76)				

*Note: N = 90; ***p<.001, **p<.05, *p<.10.*

4.3.1. Does justice sensitivity predict behavior?

In order to determine the effect of justice sensitivity, we examined how prosocial facets of JS correspond to behavior. Bivariate correlations support our hypothesis that prosocial justice sensitivity significantly predicts the amount of money assigned to person B, $r_{prosocial}$=.34, p<.01,.(all presented results of $JS_{prosocial}$ are structurally equivalent for the three sub-dimensions perpetrator, beneficiary, and observer, see Table 1). Contrarily, victim-sensitivity did not predict prosocial behavior, r_{victim}=-.05; p=.66. Thus, personality measured by justice sensitivity significantly predicts prosocial behavior in a way that people high in prosocial justice sensitivity endow receivers with more money compared to people low in prosocial justice sensitivity.

4.3.2. Does prosocial behavior depend on situations?

Next, we analyzed, how the different situation influenced people's behavior in general. It turned out that the experimental condition significantly predicted behavior. As things become more confound, people in general exploit situations for the sake of their material self-interest. ANOVA shows in a model independent of justice sensitivity that the experimental situation significantly

influences behavior, $F(2,91)=3.23$, $p<.05$; $\eta^2=.07$. Planned contrasts show a significant difference between the lottery game and the reversed property rights game, *mean difference*=.79, $p<.05$. While people demand more to themselves whenever it is receivers are in the dark about the game, they behave more fairly when the situation changes and they have to take money.

4.3.3. How do the two interact?

It was shown that both, personality and the situation, significantly predict prosocial behavior. Testing the last hypothesis, the interaction of the two was examined. We used multiple regression procedures to replicate the main effects (see respective *b's* of regressions, Table 2*)* and show the interactions between categorical and continuous variables (Aiken & West, 1991) by applying an SPSS macro provided by Matthes and Hayes (2009). The experimental condition was effect coded (-1=reversed property rights game, 0= standard game; 1=lottery game), $JS_{prosocial}$ was centered, and then both predictors were crossed to form the interaction term (see Table 2 for regression results).

Table 2: *Hierarchical multiple regression for assessment of moderation*

	Victim			Prosocial		
Dependent: € given away	*b*	*SE*	t	*b*	*SE*	t
JS	-.02	.18	-.10	.48	.16	2.89*
Version of Game	-.67	.64	-1.04	-1.67	.58	-2.89*
JS x Version of Game	.09	.20	.44	.09	.20	2.52*
Constant	2.34	.53	4.44*	1.07	.47	10.36*

Unaggregated Scales:	Perpetrator			Beneficiary			Observer		
Dependent: € given away	*b*	*SE*	t	*b*	*SE*	t	*b*	*SE*	t
JS	.37	.49	2.61*	.33	.15	2.30*	.29	.15	1.88#
Version of Game	-1.07	.14	-1.81#	-1.12	.45	-2.51*	-1.56	.54	-2.91*
JS x Version of Game	.24	.59	1.40+	.36	.17	2.04*	.43	.18	2.34*
Constant	1.12	.17	2.29*	1.59	.37	4.28*	1.55	.43	3.58*

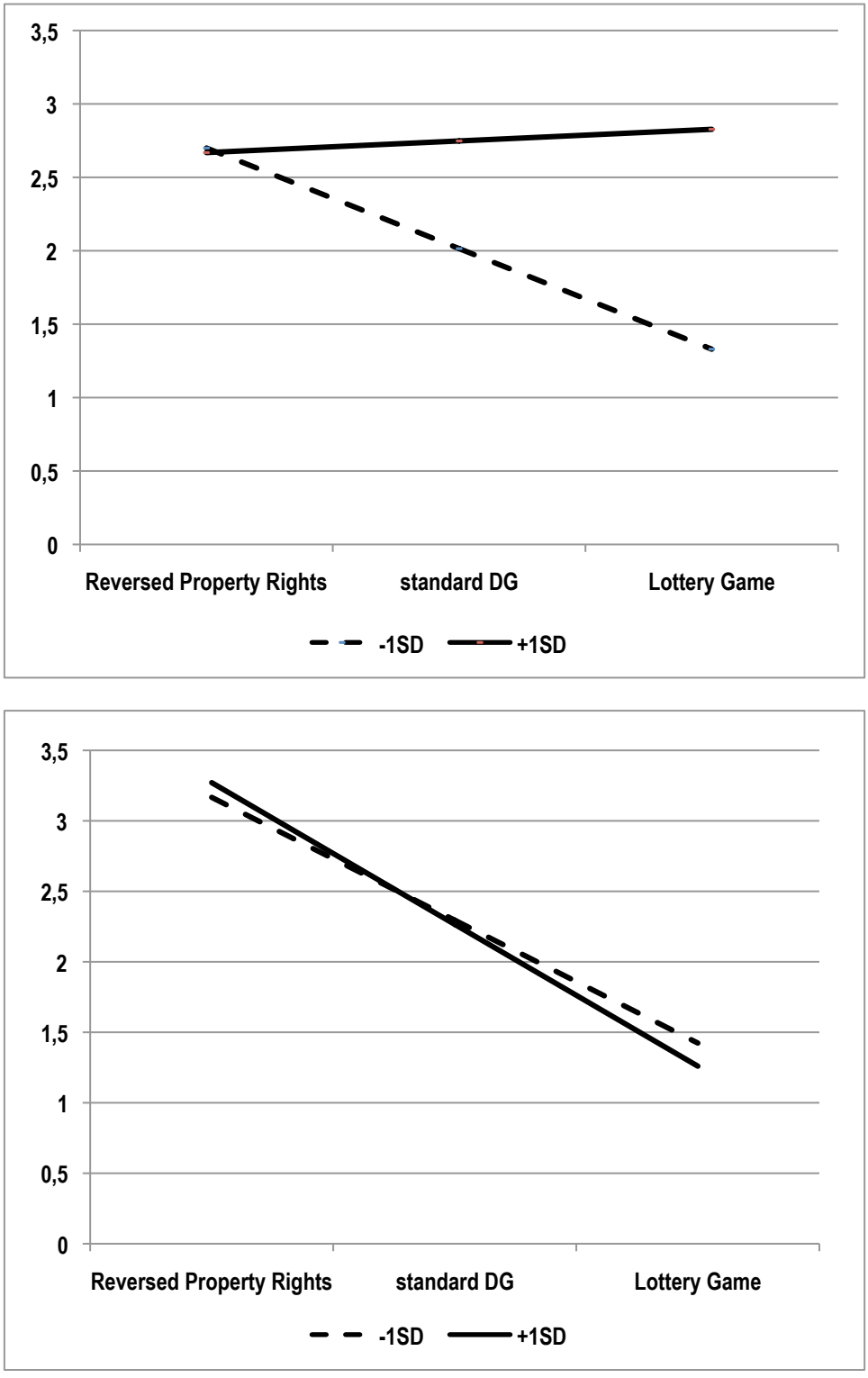
*Note: N = 90, *p<.001; #p<.05, +p<.1*

Regarding these, the following pattern was observed. In case of prosocial justice sensitivity, the interaction term was significant, b=.50, t(89)=2.52, p<.05. This effect is fundamentally equal when separating the three distinct perspectives $JS_{perpetrator}$, $JS_{beneficiary}$, and $JS_{observer}$ (see Table 2). On the other hand, the JS_{victim} interaction did not prove significant.

Slope analysis revealed the following pattern (see Figure 1). While people high in $JS_{prosocial}$ assign a largely stable amount of money to person B, people low in $JS_{prosocial}$ exploit person B for the sake of their self-interest whenever possible/legitimate. Specifically, for $JS_{prosocial}$ the simple slope of people high (+1SD) showed no slope difference from zero, t<1, indicating a stability in the amount assigned to the receiver. Contrarily, the simple slope of the group low (-1SD) showed a significant non-zero slope showing how the money given away decreases if made possible. In case of JS_{victim}, neither people high in it (+1SD) nor people low in it (-1SD) differ. Irrespectively, the situations are exploited for selfishness' sake.

Thus, the pattern fits our hypothesized directions: People high in $JS_{prosocial}$ respond to presented situations by maintaining equal levels of giving rates. However, those individuals with low scores respond to it by pursuing their material self-interest.

Figure 1: *Simple slope analyses*



Note: Dependent: € given to receiver, top panel: JS prosocial; bottom panel: JS victim

4.4. Discussion

The current research addressed the stability and fragility of prosocial behavior often found in experimental games. Using people's individual differences in justice sensitivity (Schmitt et al., 1995, 2005) and versions of the dictator game it was shown, how person-situation interactions in the context of prosocial behavior in experimental games can organize behavior. Specifically, it was shown that for people high in $JS_{prosocial}$ dictator behavior is stable across situations while others exploited situations for the sake of selfishness. Thus, population behavior is rather shaped by some people exploiting heavily (the *black sheep*) compared to everyone exploiting a little bit. In this sense, justice sensitivity serves as an internal "emergency break" to keep people from behaving in morally questionable ways.

The results raise several questions: First, one might argue that the results (especially in the game where initial endowments were place on the receiver) are only a result of the endowment effect (Thaler, 1980). However, the fact that people high in justice sensitivity gave despite this proves that they overcame this default bias.

Second, the use of justice sensitivity needs to be legitimated. As most measures of personality, a self-report scale using various items measures JS. Thus, all critiques for self-report measures equally apply to JS. However, comparing JS to other potential measures suggest JS to be very appropriate. Yet unpublished research (Lotz, Schlösser, & Fetchenhauer, 2009) on donating shows that justice sensitivity adds to predictive power of donations when other constructs such as social value orientations (van Lange, 1999), social responsibility (Bierhoff, 2000), or moral identity (Aquino & Reed, 2002) are included in the models.

Third, the results have important implications to theorizing of prosocial behavior as well as to real world contexts. What is labeled here as prosocial behavior many economists often refer to as "social

preferences" (Bolton & Ockenfels, 2000; Charness & Rabin, 2002; Engelmann & Strobel, 2004; Fehr & Schmidt, 1999, Loewenstein, Thompson, & Bazerman, 1989). When economists discuss social preferences, they often base their arguments on laboratory-observations that people's utility is not only derived by material payoffs to the self, but also by material payoffs to *other* people. Some of the discussed literature (Bardsley, 2008; Dana et al., 2006; Dana et al., 2007) seems to suggest how people's preference are instable and fragile, triggering a debate similar to the debate in psychology about the importance of personality vs. situations. Our results suggest that some "fragile" individuals (those low in JS) largely drive these effects while others react quite stably to potential altruism situations, giving equal amounts of money away. Thus, the two lines of research are somehow compatible to each other – when accounting for justice sensitivity.

Given that real-world immoral or illegal behavior is often a mixture between personality and situational opportunity, individual response to systematic variations in the situation seems a promising area of research. Future studies could include an analysis of broader ranges of behavior in different context, such as coordination dilemmas, the provision of public goods, and how to overcome typical obstacles of beneficial behavior in groups.

5. Justice sensitivity, moral emotions, and altruistic punishment[3]

5.1. Introduction

The functioning of human social life cannot be thought without social norms guiding the individuals' behavior (Tooby & Cosmides, 1992). However, many situations provide temptations to violate these norms at the expense of other people. But what happens if such transgressions are observed by independent third-parties? Imagine yourself in the following situation: You are to witness the interaction of two anonymous persons. One of them, the proposer, is given an endowment of € 10 and has the task to anonymously divide the money between himself/herself and another person, the receiver. The proposer, thus, dictates a fraction to the receiver and both persons leave with the respective amount of money. As an independent third person you are notified about the proposer's decision that he/she has kept € 10 and has given € 0 to the receiver. Now, you face several intervention options: You can either do nothing at all; in this case the receiver leaves with € 0, the proposer leaves with € 10, and you get € 5 remuneration. Alternatively, you can sacrifice some money you are about to receive and impede the proposed allocation. In this case, for every Euro you invest, the proposer's money is reduced by two Euros. At ultimate punishment, all three, including you, leave completely empty-handed. How would you feel in such a situation as the independent third person? Would you sacrifice your money and, thus, intervene against an unfair allocation?

This experimental situation has been designed to reflect the structure of social behavior outside the laboratory such as whistle blowing (e.g., Hopman & van Leeuwen, 2009), social courage, or other

[3] An article based on this chapter is currently under review. Coauthors are Thomas Schlösser, Anna Baumert, Franz Gresser, and Detlef Fetchenhauer

costly forms of bystander intervention (Latané & Nida, 1982; Levine & Crowther, 2008) against witnessed norm violations. In a strictly egoistical sense, people should not, for example, speak up at work when observing injustices of any kind as whistle blowing might cost them their job. Likewise, social courage, for example by intervening in physical fights on the street (e.g., when an old lady is attacked by some teenagers) yields no personal benefits but implies a substantial risk for one's health or even one's life.

In the presented experimental context, totally unaffected third parties should also have no selfish reason to use own resources to engage in altruistic punishment (Heckathorne, 1989). But nevertheless, research in different branches of social science has shown that people do. This phenomenon has been called altruistic punishment (Fehr & Gächter, 2002; Fehr & Fischbacher, 2003), strong reciprocity (e.g. Gintis, 2000), norm enforcement (e.g. Horne & Cutlip, 2002), or deontic justice (Cropanzano, Goldman & Folger, 2003; Turillo, Folger, Lavelle, Umphress & Gee, 2002).

The aim of the present study was to investigate systematic individual differences in the motivation to altruistically punish. Specifically, we addressed justice sensitivity (Schmitt, Baumert, Fetchenhauer, Gollwitzer, Rothmund & Schlösser, 2009; Schmitt, Gollwitzer, Maes, & Arbach, 2005) as a personality disposition as well as moral emotions as driving factors explaining these individual differences in behavior. Specifically, we expected that the impact of justice sensitivity on intervention behavior should be mediated by moral emotions elicited by an injustice.

5.1.1. Justice Sensitivity and Altruistic Punishment

A personality trait that should boost moral outrage as emotional reaction toward witnessed injustice is justice sensitivity. It measures stable and consistent individual differences in justice concerns. Schmitt, Neumann, and Montada (1995) suggest four indicators to measure individuals' justice sensitivity (see also, Schmitt et al.,

2009). These indicators are the frequency of experienced injustices, the intensity of emotional reactions to injustices, for example anger (Mikula et al., 1998, Törestad, 1990), the mental intrusiveness, and the punitivity towards the perpetrator (see e.g., Wenzel & Okimoto, 2008).

As episodes of injustices can be experienced from various perspectives, justice sensitivity is differentiated accordingly into victim sensitivity (JS_{victim}), beneficiary sensitivity ($JS_{beneficiary}$), and observer sensitivity ($JS_{observer}$). These three facets of justice sensitivity share some common variance interpreted as reflecting general justice concerns (Gollwitzer et al., 2005). Moreover, $JS_{beneficiary}$ and $JS_{observer}$ involve genuinely other-oriented justice concerns and have been found to correlate with prosocial personality traits such as empathy, social responsibility, and role taking. JS_{victim}, by contrast, seems to be a combination of other-oriented as well as self-oriented concerns (Gollwitzer et al., 2005, Fetchenhauer & Huang, 2004; Schmitt et al, 2005). It was found to correlate positively with rather anti-social measures such as Machiavellianism, jealousy, and vengeance (Schmitt et al., 2005).

Particularly important in the present context is that the three facets of justice sensitivity can be expected to have distinct behavioral consequences when injustice is witnessed. The research of Fetchenhauer and Huang (2004) reveals important points of altruistic punishment. However, beyond showing the effects of personality dispositions, the exact psychological processes driving these effects are not addressed. The goal of the present research was to replicate the findings of Fetchenhauer and Huang and to complement them in these important ways.

$JS_{beneficiary}$. In the situation described in the beginning, participants may find themselves as passive beneficiaries of the unjust situation as they were lucky not to be in the position of the receiver. Participants high in $JS_{beneficiary}$ should be prone to spontaneously interpret the situation as a violation of their justice

concerns. Because they are particularly reluctant to have unfair advantages, in comparison to persons low in $JS_{beneficiary}$, we expect them to be motivated to invest their money to restore justice.

$JS_{observer}$. Similarly, justice sensitivity from the observer perspective can be expected as a determinant of altruistic punishment. Taking the perspective of neutral observers, people high in $JS_{observer}$ should be particularly prone to perceive the unequal distribution between proposer and receiver as unfair, and, thus, should be motivated to engage in re-establishment of justice even by sacrificing their endowment.

JS_{victim}. By contrast, justice sensitivity from the victim's perspective is mainly related to situations, in which people perceive themselves to be the victims of unfair events. Hence, people scoring high on JS_{victim} should be rather unaffected by unfair events that they are not personally involved in. JS_{victim} includes both self-related and other-related justice concerns that lead to conflicting behavioral tendencies that should level each other out.

5.1.2. Indirect Effects: Justice Sensitivity on Altruistic Punishment Mediated by Moral Emotions

In order to explain the psychological mechanisms behind altruistic punishment, it seems of high importance to understand how justice concerns motivate a costly restoration of justice. The emotions involved in justice perceptions and behavior have been the subject of much psychological research (Mikula, Scherer, & Athenstaedt, 1998; Montada, 1994; Montada & Schneider, 1989), with particular focus on emotional mediators between perceived injustice and subsequent behavior (e.g., Barclay, Skarlicki, & Pugh, 2005; Murphy & Tyler, 2008). Principal among this research is the experience of "moral outrage" (see Feather, 2006; Mikula, 1986) – anger, contempt, and disgust emotions evoked by the intentional violation of cherished moral principles (see Batson, 1994; Darley, 2002; Haidt, 2003; Mikula, et al.1998; Montada & Schneider, 1989).

Moral outrage has repeatedly been shown to elicit retributive responses such as retaliation, punishment, aggression, and revenge (e.g., Averill, 1982; Barclay et al., 2005; Feather, 2006). Indeed, moral outrage is the critical emotion mediating the effect of perceived injustice and injustice severity on punishment (see Carlsmith, Darley, & Robinson, 2002; Fehr & Gächter, 2002).

Moral emotions have been recognized as a crucial element of the human moral apparatus and as an important link between moral standards and behavior (Blasi, 1999; Tangney, Stuewig, & Mashek, 2007). Taking a functionalistic approach, Haidt (2003) defines moral emotions as those emotions "…that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent" (Haidt, 2003, p. 853). Fehr and Gächter (2002) suggest that moral emotions are a key proximate mechanism determining altruistic punishment. Consistently, in a neuro-imaging study by de Quervain et al. (2004) altruistic punishment was associated with activation in brain regions connected to rewards letting the researchers argue that this result is due to the fact that it "feels good" to punish unfair others. Hence, punishment may work as a tool to regulate negative emotions. Accordingly, we expect that the confrontation with an unfair act triggers moral outrage and, thus, motivates individuals to retaliate.

Importantly, it can be assumed that the degree that perceived unfairness triggers moral outrage depends on the perspective taken toward the unfairness. Specifically, research suggests that subjective self-involvement in an unjust episode is crucial for triggering "hot" emotions (Skitka, 2003). Accordingly, the perspective of a passive beneficiary of injustice and of a neutral observer can be distinguished: A person in the former perspective experiences him- or herself as genuinely involved in the unjust episode and can, thus, be expected to react with stronger emotions. By contrast, the latter perspective may involve rather "cold" cognitive processes.

Regarding the individual strength of justice concerns as reflected in dispositional justice sensitivity, particularly persons high in beneficiary sensitivity (compared to persons low in beneficiary sensitivity) should be prone to experience self-involvement in unfairness and should, thus, react with strong moral outrage, which in turn should motivate them to intervene and altruistically punish the norm violators. Thus, we expect moral emotions to be a mediator of the effect of beneficiary sensitivity on altruistic punishment. Observer sensitivity, by contrast, should feel lesser self-involvement and thus do not engage in punishment through the experience of "hot" emotions.

5.1.3. Defaulted Punishment

As punitive intervention serves the restoration of a basic justice principle, altruistic punishment may thus have the connotation of being morally right. Nevertheless, other moral standards may prohibit the punishment of another person independent of his or her transgressions (e.g., the "do no harm" principle outlined by Baron, 1996). Some people might claim that "two wrongs do not make it right" (Cropanzano et al., 2003; Turillo et al., 2002). Thus, we also expect a substantial share of participants not to engage in any punishment activity. Following this rationale, the present research also aimed to explore the reasoning underlying defaulted punishment. Punishment is only one of various means to restore justice subsequent to a transgression (Wenzel & Okimoto, 2008; Wenzel, Okimoto, Feather, & Platow, 2008). Consequently, subjective reasons for non-punishing may be not purely selfish (as commonly assumed by economists who analyzed altruistic punishment as a second order social dilemma, i.e. the third-party is materially worse off punishing and thus does not do it, the agent anticipates this and thus does not split fairly; Fehr & Gächter, 2002), but may also reflect moral standards. We explored whether justice sensitivity also provides an organizing pattern in the reasoning underlying defaulted

punishment. While people relatively high in $JS_{beneficiary}$ and $JS_{observer}$ might argue based on moral reasons, people high in JS_{victim} might rather apply selfishly motivated reasoning.

Summarizing, we expected some people to be willing to altruistically punish unfair norm violations whereas others should be reluctant to invest own money for altruistic punishment (Fehr & Fischbacher, 2003). Further, these individual differences in altruistic punishment should be explained by the personality dispositions $JS_{beneficiary}$ and $JS_{observer}$, which reflect individual differences in genuine justice concerns (Fetchenhauer & Huang, 2004). By contrast, JS_{victim} should not have a direct effect on altruistic punishment.

Complementing and extending prior research, we predicted that effects of $JS_{beneficiary}$ and $JS_{observer}$ should be driven by different processes: In general, we expected the individual strength of moral emotions to predict the willingness to altruistically punish (Fehr & Gächter, 2002, de Quervain et al., 2004). Because "hot" moral emotions should only be triggered in situations of high self-involvement, we predict that subtly measured moral emotions (see method section) should mediate the behavioral effects of $JS_{beneficiary}$. For $JS_{observer}$, we expect our measure of moral emotions to be relatively less important compared to rather "cold" cognitive processes as a mediator on altruistic punishment. Finally, it is explored how motivations to not punish associate with justice sensitivity.

5.2. Method

In order to test these hypotheses participants were exposed to the experimental situation described in the introduction involving the opportunity to engage in altruistic punishment.

5.2.1. Procedure

On campus, participants were asked if they wanted to participate in several experiments. Once they agreed they were handed a questionnaire, which among other variables included the items of the justice sensitivity scales. A minimum of three weeks later, participants were invited in the laboratory and confronted with the opportunity to altruistically punish as described above.

They were seated in front of a computer in our laboratory and given an envelope including five € 1 coins. They were told that this was an additional compensation for them and they were informed about the experimental setting presented above. They were told that they were randomly assigned to the roles of one character in the experiment. In fact, all participants had the role of the third-party. As above, they were told about an unfair division of € 10 made by an ostensible proposer. Participants had the option to invest any share of their coins to reduce the proposer's payoff. An investment of 1 Euro led to a reduction of 2 Euros in the payoff of the proposer. Participants were told that the procedure was completely anonymous, which means that interaction partners would not get to know each other. Expressions such as altruistic punishment, unfair proposal, game etc. were avoided. Instead we referred to their possibility to intervene. The participants worked themselves through a computer program, which was seemingly connected to the other persons participating in the experiment. They were alone in the room and believed the others to be in adjacent rooms

After this detailed explanation all participants were confronted with the proposer keeping the entire amount of money for him/herself. To assess moral emotions in a subtle way, participants were then asked to give their statement about their thoughts and feelings. Only after they had typed in their statement and had pressed the enter-key they were informed on the next screen that they would now have the opportunity to intervene.

After participants had made their decisions, those who did not engage in punishment were asked for their underlying reasons. Specifically, they were asked why they decided in the way they did. Finally, participants were debriefed and dismissed.

5.2.2. Participants

Ninety-one undergraduates (33 males) from the University of Cologne participated in return for their varying compensation (dependent on behavior). Ages ranged between 19 and 42 years (M= 23.0; SD =3.44).

5.2.3. Justice Sensitivity

In the experiment, the 10-item scales by Schmitt et al. (1995, 2005, 2009) were used to measure $JS_{beneficiary}$ (sample item: *It bothers me when I get something that others would deserve;* α=.82), $JS_{observer}$ (corresponding sample item: *It bothers me when someone gets something they don't deserve;* α=.79), and JS_{victim} (corresponding sample item: *It bothers me when others get something that I would deserve;* α=.81) on response scales from 0 (*strongly disagree*) to 5 (*strongly agree*).

5.2.4. Moral Emotions

Participants' moral outrage was assessed by quantified qualitative measurement. After participants were confronted with the unequal proposal, but before being informed that they would have the opportunity to punish the proposer, they were asked about "what was going on in their heads" in an open format (letters in the statement: M=222, SD=191, min=10, max=1019; length was uncorrelated with variables of interest).

We opted for this rather open measure of moral emotions for several reasons. Most importantly, it reduces the risk of an experimenter's demand effect as well as socially desirable answering patterns. Letting people indicate how, for example, angry they feel by marking a number on a scale could lead to rumination about whether

or not they *ought* to feel angry in this situation. Leaving the comment field completely open, we did not demand anything specific whatsoever. Asking people how they felt in the situation led on the one hand to responses regarding moral outrage, but on the other hand to statements reflecting participants complete indifference to the proposer's behavior. For example, statements were *"Oh my god, I am furiously angry, I cannot believe that the proposer is selling his soul for the profit of € 5"* indicating moral emotions, but also *"I am so tired"* as a statement indicating that morality, in this situation, was obviously not an issue.

The exact procedure of extracting a quantifiable measure of moral emotions was as follows: The statements were pre-screened and categories reflecting moral outrage (these were *anger* and *indignation*) were identified. In the next step, three independent raters, who were all blind of participants' behavior, judged the statements. The raters indicated on a scale ranging from 1 (*not at all*) through 5 (*very much*) how angry (interrater reliability: α=.90) and indignated (interrater reliability: α=.91) they judged participants to be. For each participant, ratings were aggregated across raters and across both items (α=.96) as an indicator for the individual strength of moral emotions.

5.3. Results

Regarding the willingness to engage in altruistic punishment, 28 out of 91 participants decided to punish the proposer with some amount of their own money. As this distribution was highly skewed, we dichotomized the punishment decision into those that did at least punish to a certain degree and those that did not punish at all.

5.3.1. Bivariate Correlations Between Moral Emotions, Justice Sensitivity, and Altruistic Punishment

Table 3 provides means, standard deviations, and bivariate correlations among all variables in our study. In general, the bivariate results were as expected. First, a significant positive correlation between altruistic punishment and moral emotions showed that participants with higher moral outrage were the ones also showing a greater tendency to altruistically punish, r=.40, p<.01 (one-tailed, point-biserial correlation).

Table 3: *Means, standard deviations and intercorrelations of all variables*

Variable	1.	2.	3.	4.	5.
1. Altruistic Punishment (dichotomous, point-biserial correlations)	-	.40**	.28*	.26*	.08
2. Moral Emotions		-	.22*	.10	.11
3. $JS_{beneficiary}$			-	.53**	.27**
4.$JS_{observer}$				-	.47**
5. JS_{victim}					-
M (*SD*)	0.40 (0.46)	2.61 (1.17)	2.47 (0.79)	2.46 (0.79)	2.55 (0.70)

Note. N = 91; *p < .05; **p < .01

Despite the substantial time lag between the assessment of justice sensitivity and the laboratory session, as expected, we found significant positive correlations between altruistic punishment and $JS_{beneficiary,}$ r=.28, p<.05 (one tailed), as well as $JS_{observer,}$ r=.26, p<.05 (one-tailed). Contrarily, and also as expected, JS_{victim} and altruistic punishment were found not to correlate, r=.12, p=.40 (two-tailed).

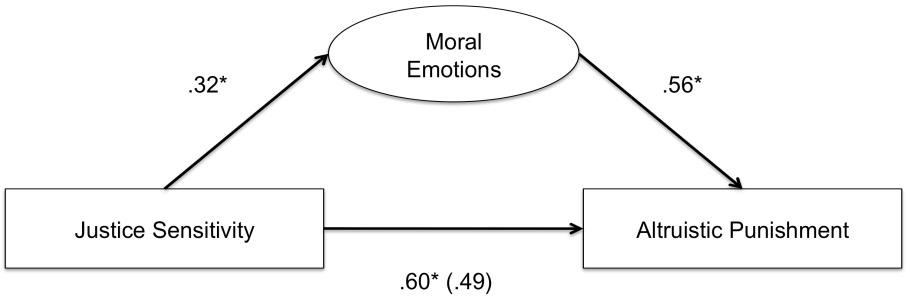
Furthermore, correlations among justice sensitivity and moral emotions were also consistent with our hypotheses. The higher participants scored on $JS_{beneficiary}$, the higher their score was on the scale *moral emotions*, r=.22, p<.05 (one-tailed). By contrast, participants score on $JS_{observer}$ and their score on *moral emotions* was not significantly correlated, r=.10, p=.18 (one-tailed). Last, JS_{victim} did not correlate with moral emotions, either, r=.11, p=.33 (two-tailed).

5.3.2. Mediation Analyses.

To test whether the effect of $JS_{beneficiary}$ was mediated by moral emotions, we conducted analyses employing bootstrapping (Preacher & Hayes, 2004, 2008, in press). Bootstrapping allows for dichotomous dependent variables is advantageous in statistical issues (e.g. higher statistical power, no assumption about the normality of the indirect path, and relatively low Type 1 error rates).

Analysis with 5000 re-samples revealed a significant indirect effect of $JS_{beneficiary}$ on altruistic punishment (indirect effect: .18; bias-corrected accelerated 95% confidence interval: 0.001 to 0.49; see Figure 2).

Figure 2: *Mediation results*



*Note: N=91, *p<.05 **p<.01.*

More specifically, the effect of $JS_{beneficiary}$ on altruistic punishment was mediated by moral emotions experienced in the moment of notification about the unfair offer even though justice sensitivity was measured several weeks in advance.

For $JS_{observer}$ as well as for JS_{victim}, there were no significant mediation effects on altruistic punishment through moral emotions as there were no significant bivariate correlations between the former variables and moral emotions.

Thus, the individual strength of justice concerns, as reflected in beneficiary-sensitivity, appears to be an importantly linked to altruistic punishment. Among persons high in $JS_{beneficiary}$, the

violation of personally important justice concerns triggers “hot” moral emotions that drive attempts to restore justice even at the cost of egoistic motivations.

5.3.3. Exploring Motivations Underlying Defaulted Punishment

As outlined in the introduction, the non-engagement in altruistic punishment can, theoretically, have various origins. To account for potential motivations and justifications of individuals who did not punish, we asked these people to write down their reasons after they had made their decision. To analyze the content of the statements, we used the method of inductive category building (Mayring, 2003). From each subject's statement, all arguments were extracted in a first take. Subsequently, the subjects' statements were re-read, and, in case that a specific argument occurred at least twice across subjects' statements, it was considered a category. This procedure yielded in total ten categories (see Table 4). In the next step, four independent raters evaluated each subject's statement regarding how strongly it reflected each of the ten categories on a scale ranging from 1 (*not at all*) to 5 (*completely*). Thus, each subject received one score on each of the ten categories from each rater. Across categories, the inter-rater reliabilities were sufficiently high (all α>.70); Last, for each subject, we aggregated the four scores across raters to form a quantifiable measure of how strongly the person employed the specific category of argumentation.

To further reduce redundancy among these ten categories, we submitted subjects' scores to a principal component factor analysis with varimax rotation. Scree test as well as Kaiser Criterion suggested a three-factor solution that explained 61.29% of the variance. Categories loading highest on the first factor were combined into a scale called *guilty conscience.* It reflects arguments pointing out that punishment would have been right, but nevertheless participants decided otherwise (sample statement: *I wish I had used some money, I feel guilty for the poor person who goes home empty-*

handed). Categories loading highest on the second factor were aggregated into the scale *efficiency*. It indicates how much participants employed arguments with respect to financial outcomes for either themselves, Person B, or the combined group (sample statement: *The group is better off if I don't do anything. This way, we have made 15€*). Finally, the category with highest loadings on the third factor was named *compensation* indicating that people were not willing to engage in altruistic punishment but would have preferred to compensate the victim (sample statement: *I would have rather used my money to help [the receiver], not to harm the decider*). Taken together, the resulting three factors suggested that the decision not to engage in altruistic punishment may indeed be based on other than selfish reasons.

Table 4: *Results of factor analysis and correlations with justice sensitivity*

			Factor Loading			Correlations		
	M	SD	Guilty Conscience	Efficiency	Compensation	Js_{victim}	$Js_{beneficiary}$	$Js_{observer}$
1. Guilty Conscience (α=.80)						**.00**	**.34*** **	**.21***
No punishment...								
…even though it would be fair in this situation	1.30	.63	.93	-.04	-.01	.06	.38***	.29**
… despite feelings of uncomfort	1.34	.60	.76	-.13	.01	.00	.19*	.14
… after an evaluation of pro and cons	1.35	.62	.78	.02	.10	-.05	.28**	.10
2. Efficiency (α=.59)						**.25****	**-.11**	**.08**
No punishment...								
…because it is inefficient and everybody is worse off	2.22	1.49	-.05	.84	.08	.25**	-.21*	.05
… because it would not yield benefits to Person B	3.10	1.91	.23	.60	.54	.12	.28**	.12
… because it does harm to the self	3.01	1.67	-.17	.69	-.44	.22*	-.37***	.02
3. Compensation (α=.29)[a]						**-.14**	**.24****	**-.04**
No punishment...								
… because would rather transfer the money to Person B	1.88	1.47	.21	-.12	.68	-.14	.24**	-.03
… because doesn't want to harm anybody	2.55	1.38	-.33	.03	.68	.12	-.01	-.04
Arguments not covered by factor analysis								
… because Persons A and B are too abstract anonymous	1.78	1.42	.08	-.57	-.08	-.17*	-.06	-.06
… because is not interested in the other people	1.27	.61	-.60	-.38	-.59	-.11	-.19*	-.09

*Note: * p < .10; ** p <.05; *** p < .01; [a]single strongest item entered analysis a part of factor "compensation" due to little internal reliability.*

Is the endorsement of the revealed arguments connected to individual differences in justice sensitivity? As bivariate correlations showed, among those people who had not punished, people high in $JS_{beneficiary}$ argued based on moral reasons compared to people low in $JS_{beneficiary}$. The higher participants scored on $JS_{beneficiary}$, the higher they scored on the scale *guilty conscience*, r=.39, p<.01 (one-tailed). Additionally, $JS_{beneficiary}$ was significantly correlated with a preference for *compensation*, r=.24, p<.05 (one-tailed), but was not related to concerns of *efficiency*, r =-.11, p=.21 (one-tailed).

People high in $JS_{observer}$ also showed the tendency to argue based on morality: Scores on $JS_{observer}$ marginally correlated with the scale *guilty conscience*, r=.21, p=.053 (one-tailed). Values on $JS_{observer}$ were, by contrast, not correlated to the will to compensate, r =-.03, p=.40 (one-tailed) or the scale *efficiency*, r=.08, p=.26 (one-tailed).

Results were quite different for JS_{victim}: This dimension of justice sensitivity did neither correlate with a *guilty conscience*, r=-.01, p=.47 (one-tailed), nor with compensation, r=-.12, p=.17 (one-tailed). However, a significant correlation between JS_{victim} and the scale *efficiency* was found, r=.25, p<.05 (one-tailed).

Summarizing, justice sensitivity was not only consistently connected to punishment behavior but also to reasoning and motivation underlying defaulted punishment. The different dimensions showed quite different patterns. While $JS_{beneficiary}$ is rather connected to other-related justice concerns and thus expressed moral concerns, JS_{victim} always involves self-concerns. $JS_{observer}$ was located between the two. Thus, the latter dominantly expressed concerns related to themselves and why an engagement in altruistic punishment would have not been efficient.

5.4. Discussion

The main goal of the present research was to provide evidence that individual justice concerns as reflected by the personality trait

justice sensitivity motivate the sacrifice of own resources to punish violators of basic justice principles. Moreover, complementing and extending prior research, we investigated moral emotions as a potential mediator of the effects of justice sensitivity.

Consistent with prior findings, our study revealed substantial inter-individual variance in the willingness to altruistically punish. While some people sacrifice money for the sake of justice, other people stop short of supporting moral norms if their self-interest is at stake. The personality disposition justice sensitivity helps to explain the puzzle of these differences in altruistic punishment. Whereas the beneficiary and observer dimensions of justice sensitivity were found to be associated with higher willingness to altruistically punish, the victim-dimension was not. The evidence provided here was, in this respect, a replication of previous evidence found by Fetchenhauer and Huang (2004). Whereas the beneficiary and observer sensitivity is related to rather prosocial behavior, the victim sensitivity is not connected to behavior, because it involves diverging motives for the self and others, two aspects, which may cancel each other out in this type of decision task.

Further, investigating individual differences in the willingness to altruistically punish here also meant to explore the reasoning and motivation underlying the decision not to engage in such punishment. Specifically, it was explored, whether or not justice sensitivity only helps to explain altruistic punishment or also helps to structure reasons and motivations for defaulted punishment. Especially in economics, the non-punishing of unfair propositions has been interpreted as clearly selfish or as a second order dilemma (Fehr & Gächter, 2002). As our results stress, from a psychological perspective, this view appears rather limited. A detailed look at non-punishers revealed that motivations are not only self-oriented. In the case of non-punishing, justice sensitivity as a personality disposition helps to disentangle the various motives for defaulted punishment.

In line with theoretical predictions, people high in JS_{victim} who did not punish mainly argued based on their personal self-interest. By contrast, people high in $JS_{beneficiary}$ argued that they would rather compensate the victim and that they had moral hesitations to punish and at the same time felt guilty not to have intervened. This view possibly originates from different moral principles of justice – as outlined above – such as the claim that another harm does not re-store the original harm (e.g., Cropanzano et al., 2003; Turillo et al., 2002).

To complement the present research, future studies should, therefore, investigate whether some individuals rather engage in active compensation of the victims of unfair proposals instead of punishment towards the proposer knowing that both are effective in restoring justice (Okimoto & Wenzel, 2008). This could include behavioral options of compensatory acts as well as other means of justice-restoration such as apologies by the offender or restorative conferencing.

The highly robust finding of altruistic punishment has moved social scientists to consider other genuine human motivations besides selfishness. Particularly, moral emotions have been proposed as determinant of altruistic punishment in game-theoretic paradigms (Fehr & Gächter, 2002). As to our knowledge, our study is the first to provide systematic support for this assumption. Importantly, we found that people displaying stronger moral outrage as a reaction to an unfair distribution of money subsequently were more prone to engage in altruistic punishment. This result was found with an open measurement of emotions. Physiological measures might also be an adequate instrument. Both kinds of measures share the advantage of content analyses of open responses employed in the present study, namely, the exclusion of demand effects.

In previous research, personality differences in emotions (DeNeve & Cooper, 1998; Diener & Lucas, 1999; Ng & Diener, 2009) have been consistently documented. Additionally, the role of

personality regarding justice-related behavior has been the subject of various previous studies (Fetchenhauer & Huang, 2004, Gollwitzer et al., 2005). Moral emotions have been suggested as a mechanism underlying altruistic punishment (Fehr & Gächter, 2002, De Quervain et al., 2004). Hence, the integration of research on personality and on moral emotions as joint influence of behavior in experimental games is the merging of various research strains.

The most important novelty of this research is thus the analysis of the two explanatory variables of altruistic punishment, justice sensitivity and moral emotions and their influence via mediation on altruistic punishment. Our key result is that moral emotions were found to be a mediator in the relationship between justice sensitivity and altruistic punishment. Whereas people high in $JS_{beneficiary}$ experienced higher moral emotions and subsequently engaged in punishment, people high in JS_{victim} did not experience higher moral emotions and, thus, did not engage in altruistic punishment. $JS_{oberver}$ was only connected to engagement in altruistic punishment but not to the experience of moral outrage. This is an indicator that $JS_{observer}$ is, indeed, rather connected to "cold" contempt than to "hot" moral outrage as in $JS_{beneficiary}$.

As an overall summary, our studies provide evidence that justice does not, be it at least for beneficiary-sensitive individuals, stop at one's doorstep, but that these people feel emotionally aroused and morally obliged to sacrifice fairly large sums of resources in order to reestablish what they subjectively regard as fair. This result even holds when interacting with complete strangers. Justice, no matter towards whom, is an important concern for people highly sensitive towards injustices. It seems they implicitly followed an argumentation once made by Martin Luther King jr. "Injustice anywhere is a threat to justice everywhere" and then acted accordingly.

6. Emotional Antecedents of Third-Party Interventions[4]

6.1. Introduction

Uninvolved third-parties often witness injustices, engaging in a decision whether or not to intervene. Perhaps reflective of our reliance on sanctions in the legal system, the third-party intervention literature has been overwhelmingly dominated by the study of punishment of the perpetrator. This research has shown that people are largely willing to stand up for justice despite the lack of direct or measurable gains for the third-parties, a phenomenon often referred to as altruistic punishment (Fehr & Gächter, 2002; Fetchenhauer & Huang, 2004). Social neuroscience has suggested that such third-party interventions are functionally different to victim revenge (Buckholtz et al., 2008), leading to activation of brain regions connected to rewards and counterbalancing the negative feelings associated with the offense (de Quervain et al., 2004).

Importantly, however, alternative interventions, including compensation, have been largely under-researched (c.f. Leliveld, van Dijk, & van Beest, 2008). This is surprising given that compensation may be just as frequent, particularly in social (i.e., non-legal) situations where the costs of punishment are risky and burdensome. It is therefore necessary to more fully explore other, arguably more constructive approaches to justice-restoration to determine whether they are driven by similar underlying motives, and thus whether a third-party observer's willingness to punish equates with their willingness to compensate.

In the current research, we examine third-party observers' justice sensitivity (Schmitt, Gollwitzer, Maes, & Arbach, 2005) as it

[4] An article based on this chapter in currently under review. Coauthors are Tyler Okimoto, Thomas Schlösser, and Detlef Fetchenhauer.

predicts willingness to compensate victims of injustice and/or punish the perpetrator. To examine these behavioral responses, we employed a modified punishment game (Fetchenhauer & Huang, 2004) that allows participants to incur a cost for the ability to assign either (or both) injustice response. We suggest that both punishment and compensation are viable options for the restoration of an observer's justice concerns. Further, we suggest that each response follows from different ethical motives and has distinct emotional antecedents.

6.1.1. The Consequential versus Deontological Motives

At its core, a third-party's act of compensation is an attempt to address the negative consequences of an offense, while the act of punishment is an attempt to address the immoral intent of the offender through the administration of just deserts (Carlsmith, Darley, & Robinson, 2002; Falk, Fehr, & Fischbacher, 2008). In philosophical terms, this is a distinction between deontological versus consequential ethical motives. Although there is clearly overlap (e.g., consequential motives also underlie punishment), compensation is a relatively more consequential response than punishment, which is relatively more deontological. Thus, the primary assertion in the literature that demands for justice are largely driven by deontological demands for just deserts (e.g., Carlsmith et al., 2002; Falk et al., 2008) may be a result of its disproportional focus on punishment.

Notably, if compensation is indeed driven by more consequential (i.e., utilitarian) motives than punishment, it is not the injustice itself that demands compensation but rather the victim's suffering that results from the injustice. Therefore, in situations where the victim does not suffer the effects of the transgression or is unaware of the intentional harm, compensation may not be necessary for justice restoration. In contrast, demands for punishment should persist irrespective of the victim's experience of victimization, as relatively

stronger deontological concerns follow from the unjust act regardless of the associated consequences.

6.1.2. Distinct Emotional Antecedents to the Reestablishment of Justice

Reflecting distinct ethical motives, compensation and punishment may also address discrete moral-emotional concerns. Research on justice-based emotions (see Mikula, Scherer, & Athenstaedt, 1998; Montada & Schneider, 1989) has focused on emotional mediators between perceived injustice and subsequent behavior (e.g., Barclay, Skarlicki, & Pugh, 2005, Chebat & Slusarczyk, 2005; Murphy & Tyler, 2008). Principal is the experience of "moral outrage" (Feather, 2006; Mikula, 1986) – anger, contempt, and disgust emotions evoked by the intentional violation of cherished moral principles (Darley, 2002; Haidt, 2003) – which precedes retributive responses such as retaliation, punishment, and aggression (e.g., Averill, 1982; Barclay et al., 2005; Feather, 2006; Skitka, 2002). Indeed, moral outrage is the critical emotion mediating the effect of perceived injustice severity on punishment (Carlsmith & Darley, 2008; Fehr & Gächter, 2002).

In contrast, relatively little research has explored the link between emotions and compensatory justice. Some recent research has documented a link between moral outrage and redistribution of resources in response to societal-level inequities (Montada & Schneider, 1989; Wakslak, Jost, Tyler, & Chen, 2007) and mandates of offender-conferred compensation (Darley & Pittman, 2003). However, there remains a dearth of empirical work exploring the emotional correlates of compensatory justice in interpersonal transgressions.

Interestingly, despite the logical conclusion that moral outrage is not the only emotional response to injustice, there also remains limited evidence documenting the existence (or absence) of other types of emotional reactions. This may in part be due to the strong

focus on punishment in the literature given that it is primarily non-punitive domains where emotional correlates other than moral outrage have been documented. For example, guilt predicts redistribution following social inequities (Montada & Schneider, 1989), empathy predicts forgiveness (McCullough et al., 1997, 1998), and sadness/disappointment predicts consensus seeking (Okimoto, Wenzel, & Feather, 2009). Given the lack of existing empirical specification regarding the emotional antecedents of compensation, we will examine a variety of emotions and rely on emergent factors to elucidate the primary dimensions of import. However, based on the general themes identified in the literature, we offer a general prediction: outward-focused emotions (i.e., moral outrage) will be related to punishment while inward-focused emotions (e.g., anxiety and fear) will be uniquely related to compensation.

6.1.3. Justice Sensitivity

Clearly, desires to intervene vary across individuals. To capture this individual-level variance, we examined participants "justice sensitivity" (JS; Schmitt et al., 2005). JS measures stable individual differences that predict the frequency of injustice perceptions, intensity of emotional reactions, mental intrusiveness, and behavioral reactions toward injustices as indicators of justice sensitivity, while also capturing victim, perpetrator, beneficiary, and observer dimensions. JS has proven valuable in predicting pro- and antisocial behavior in scenario studies (Gollwitzer et al., 2005) and experimental games (Fetchenhauer & Huang, 2004). In the current context, people high in $JS_{observer}$ (see Schmitt et al., 2005) should respond with stronger emotions (inward and outward) than those low in $JS_{observer}$ and, consequently, should be more likely to punish the perpetrator and/or compensate the victim.

6.2. Method

Participants included 178 students (66 % female) between 19 and 33 years of age (*M*=22.83, *SD*= 2.46). They first completed a measure of $JS_{observer}$ (see Schmitt et al., 2005; α=.85). Then, in a follow-up session two weeks later, they participated in the experimental game.

We tested our primary hypotheses using an experimental game (Fehr & Gächter, 2002), a research tradition that has focused on offender punishment and ignored the realistic options offered by compensatory alternatives. Upon arriving, participants were told that they had been randomly assigned to the role of "Person *C*" in a study involving three people. They were told that Person *A* was given 10€ to allocate to him/herself and an anonymous Person *B*, and that Person *A* had split the endowment unfairly at 10:0.

In order to vary Person *B*'s experienced consequences of the unfair allocation, we included a manipulation where the victim believed that his share of money was due either to the unfair intentions of a perpetrator (victim visibility) or to mere chance (victim non-visibility). Specifically, in the victim visibility condition, participants were told that Person *B* was fully aware of the entire details of the study. In contrast, in the victim non-visibility condition, participants were told that Persons *B* thought a lottery determined his share of the money; in this case, they were both unaware of Person A's unfair allocation, as well as participants' interventions.

We then assessed participants' emotional reactions immediately after they were confronted with the injustice. We assessed 20 items from the PANAS (Watson & Clark, 1988) and submitted these items to a principal component factor analysis (Varimax rotation). Four factors were extracted (eigenvalues > 1), with two factors capturing negative affect and two factors capturing positive affect. Given the injustice domain, the two positive factors did not provide useful information and were dropped from the analysis. However, the two negative factors matched the distinction between outward and inward

focused emotions. Outward-focused emotions (α=.85) included items typically classified as moral outrage: angry, shocked, hostile, distressed, and aggravated. Inward-focused emotions (α=.63) included: fearful, nervous, confused, and guilty. Items within these two groups were averaged to create composite scales.

Participants were then given their own endowment of 5€. It was explained to them that, if they wanted, they could re-allocate their initial endowment to punish the offender, compensate the victim, some combination of the two, or to keep it for themselves. In other words, they were allowed to reallocate their initial budget in any way that they pleased. Reallocation was made in 50 Cent increments, and each 50 Cent reallocation resulted in a 1€ consequence. Any money not reallocated to punishment or compensation was participant payment.

6.3. Results

Descriptive statistics and inter-correlations are presented in Table 5. We used multiple regression procedures to test interactions between categorical and continuous variables (Aiken & West, 1991). JSobserver was centered and crossed with victim visibility (-1=aware, 1=unaware) to form the interaction term.

Table 5: *Means, standard deviations and intercorrelations of all variables*

	Victim Visibility ***M (SD)***	**Victim Non-Visibility** ***M (SD)***	**2.**	**3.**	**4.**	**5.**
1. Punishment	0.89 (1.27)	0.95 (1.40)	.10	.41***	.13***	.23***
2. Compensation	1.28 (1.10)	1.08 (0.99)	-	.38***	.36***	.26***
3. Outward Emo.	1.46 (0.58)	1.46 (0.57)	-	-	.51***	.26***
4. Inward Emo.	2.35 (0.97)	2.23 (0.87)	-	-	-	.21**
5. $JS_{observer}$	2.55 (0.81)	2.58 (0.80)	-	-	-	-

Note: **p<.05, ***p<.001

Generally, participants used both compensation (*M*=1.27€; *SD*=1.10) and punishment (*M*=0.89€; SD=1.27) to re-establish justice. Main effects were identified for $JS_{observer}$ on both punishment, β=.36, $t(175)=1.99$, $p<.05$, and compensation, β=.35, $t(175)=2.49$, $p<.05$, with higher $JS_{observer}$ eliciting more intervention. Victim-visibility had no main effect on either behavior (see Table 6), but showed a moderating effect on $JS_{observer}$. For compensation, we identified a significant interaction, $t(175)=-1.69$, $p<.05$ (one-tailed). Slope analysis revealed that under victim-visibility, $JS_{observer}$ had an effect on compensation, $t(89)=2.49$, $p<.05$. However, when the victim was blind to his victimization, $JS_{observer}$ did not have a significant effect, $t<1$. In other words, participants high in $JS_{observer}$ compensated more than participants low in $JS_{observer}$ when the transgression was visible to the victim. In contrast to compensation, the interaction between $JS_{observer}$ and visibility was not significant for punishment. Regardless of visibility, participants high in $JS_{observer}$ assigned more money for punishment compared to participants low in $JS_{observer}$.

Table 6: *Regression results for all dependent variables*

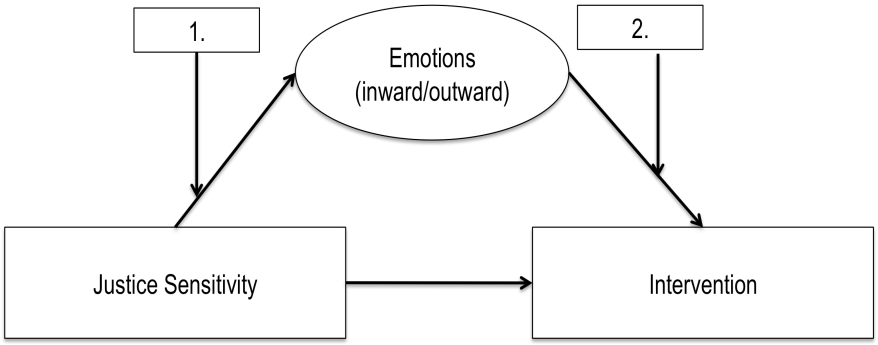
		Compensation			*Punishment*		
		b	*SE*	t	*b*	*SE*	t
JS		.35	.14	2.49*	.36	.18	1.99*
Visibility		.63	.52	1.22	.73	.67	1.10
JS x Visibility		-.32	.19	-1.69	-.27	.25	-1.06
	Constant	.39	.37	1.04	-.03	.48	-.05
		Inward Emotions			*Outward Emotions*		
		b	*SE*	t	*b*	*SE*	t
JS		.15	.08	1.99*	.30	.12	2.50*
Visibility		-.23	.28	-.84	.04	.45	.08
JS x Visibility		.09	.10	.83	-.06	.17	-.37
	Constant	1.08	.20	5.40**	1.57	.32	4.86**

Note. +p<.10*$p < .05$; ** $p < .01$; *** $p < .001$.

6.3.1. Testing Models of Mediation and Moderation

To further explore the processes underlying participants' interventions, and to judge the equivalence of those processes for punitive and compensatory behaviors, we tested two possible mediating models (see Figure 3) for each outcome: (1) mediated moderation, where both emotional reactions and justice interventions are contingent on victim visibility (i.e. victim-visibilty moderates initial relationship of JS to both), versus (2) moderated mediation, where injustice consistently elicit emotional reactions, but the link between those emotions and subsequent justice interventions is contingent on victim visibility (for an overview, see Preacher, Rucker, & Hayes, 2007).

Figure 3: *Overview of moderated mediations*



Moderations and mediations

To test the moderation model, we used macros provided by Preacher et al. (2007). As shown in Table 6, $JS_{observer}$ had a significant main effect on both inward and outward-focused emotions. However, victim visibility did not moderate the impact of $JS_{observer}$ on those emotional reactions. Participants high in $JS_{observer}$ reported higher levels of both emotional reactions regardless of the victim's knowledge of the injustice. Nonetheless, consistent with past research (Carlsmith & Darley, 2008), when including both emotions as

possible mediators, we found evidence suggesting an indirect effect of $JS_{observer}$, through outward-focused emotions, on both punishment (*coefficient*=.64, *SE*=.12; 95%*CI*=.01 to .23) and compensation (*coefficient*=.36, *SE*=.09; 95%*CI*=.03 to .20) interventions. In other words, outward-focused (i.e., moral outrage) emotional reactions mediated the link between justice sensitivity and subsequent third-party interventions. In contrast, inward-focused emotions did not appear to mediate the link between JS and behavioral interventions. Notably, however, this does not necessarily negate the role of inward-focused emotions. Because the analysis failed to fully explain the pattern of the interaction, it was necessary to test a full model of moderated mediation.

Moderated mediation

To test the moderated mediation model, we used a procedure recommended by Preacher et al. (2007; model 5). Results show that, although $JS_{observer}$ predicted stronger emotional reactions regardless of the victim's knowledge of the injustice, the translation of that emotional experience to compensatory behavior was qualified by an interaction with the victim's knowledge of his/her victimization. Specifically, inward-focused emotions predicted compensation more strongly under victim visibility; however, when participants believed that the victim attributed his outcomes to a lottery draw, inward-focused emotions were not related to compensatory behavior. All other paths remained unaffected by victim visibility. Table 7 provides all coefficients of the moderated mediation analysis.

Table 7: *Moderated mediation*

	DV: Compensation			DV: Punishment		
	b	*SE*	t	*b*	*SE*	t
JS	.25	.22	1.84^{+}	.33	.19	1.78^{+}
Visibility	1.27	.57	2.20*	.87	.76	1.15*
JS x Visibility (1.)	.24	.20	-1.22	-.25	.26	-.98
Inward Emotion	.61	.20	3.12*	.19	.26	.75
Inward Emotions x Visibility (2.)	.59	.42	-2.12*	-.12	.37	-.32
Constant	.27	.42	.64	.24	.56	-.42

Note: N = 178 $^{+}$p<.10*$p < .05$; ** $p < .01$; *** $p < .001$.

6.4. Discussion

The current research contributes to the literature on third-party justice interventions in three specific ways. First, this research highlights the failure of the experimental games and altruistic punishment literature to examine other types of justice interventions, in this case compensation. Indeed, the current findings indicate that in this game context, participants actually prefer compensation to punishment. Although it remains an open question whether compensation is preferred in responses to real observations of injustice across a broad range of situations, such a general effect is not entirely unexpected given the non-monetary costs and risks associated with real-life punishment.

Second, this research emphasizes the importance of considering alternative forms of justice interventions by providing evidence that punishment and compensation offer two conceptually different approaches to the reestablishment of justice. From the results, punishment appears to be a deonance-driven response associated with moral outrage, robust to variation in the victim's experience of injustice and suffering. In contrast, compensation appears to be a consequence-driven response associated with inward-focused emotions that only translate into action when the victim appears to suffer from feelings of victimization following an injustice.

Finally, the specific pattern of results identified by the moderated mediation analysis suggests that victim visibility does not moderate the experience of justice-based emotions, but rather influences whether those emotions result in justice-restoring behavior. Justice-sensitive participants felt sadness and guilt regardless of the victim's knowledge of the offense, but lack of victim knowledge reduced the likelihood that those emotions resulted in compensation. This might suggest that the justice-related "consequences" demanding compensation are tied to the victim's suffering rather than the unfair allocation of resources and relative deprivation. Alternatively, it could also suggest that compensation is not really a "justice-based" response but rather a strategic behavior meant to gain the gratitude of its recipient rather than to restore inequity. Punishment, by comparison, does not require the victim's acknowledgement or gratitude, suggesting that it serves as an offender-directed intervention meant to address only deontological concerns.

In summary, this research suggests fundamental differences between punishment and compensation as third-party justice responses. While considering the differential processes specifically underlying their assignment is clearly worthy of further clarification, people largely rely on both punishment and compensation as options when responding to an injustice. As such, it is critical to consider them both in tandem when attempting to understand when and why third-parties are willing intervene even at the cost of their own outcomes.

7. The taste of fairness – How ethical labeling of consumer goods shapes people's taste experience[5]

7.1. Introduction

When engaging in consumption decisions about foods and drinks, people are confronted with huge amounts of information such as price or brand. Increasingly, more detailed information about products include calorie load, fat-content, organic production, or ethical labeled production using *Fair Trade*, which signals a "fair" price paid to producers in third world countries rather than the "world-market price". This information-overload has motivated psychological and marketing research to devote many studies to the question how consumers evaluate such informational cues with respect to preference ratings (e.g. Allison & Uhl, 1964; Gerstner, 1985; Huber & McCann, 1982; Levin & Gaeth, 1988; Rao & Monroe, 1989 Shiv, Carmon, & Ariely, 2005).

This research addressed the existence of so-called *labeling effects* (e.g. Pohl, 2004), which is people's tendency to base their product evaluation on such extrinsic product cues (i.e. price, looks, or tags) instead of intrinsic cues. The agreed notion in the literature is that the labeling effect has its foundation in the consumer's tendency to hold congruent a-priori beliefs, pre-trial quality expectancies, as well matching judgment of products (Shiv et al., 2006). Prominent evidence is delivered by the infamous Coke/Pepsi study showing that the exposure to the preferred brand strongly determines taste preference (Woolfolk, Castellan, & Brooks, 1983). Specifically, it was found that the container (coke vs. pepsi can) had a greater effect on consumer's reported taste experience than the

[5] An article based on this chapter is currently under review. Coauthors are Fabian Christandl and Detlef Fetchenhauer.

content of the cans. Further, it was shown that consumers are fooled by labels and led to believe low-priced products to be of lower quality (Gerstner, 1985; Huber & McCann, 1982; Rao & Monroe, 1989), beer to be better if it is labeled with their favorite brand (Allison & Uhl, 1964), as well as to prefer 75% fat free meat over the same meat containing 25% fat (Levin & Gaeth, 1988).

In the current context, we offer an additional explanation for the effect in case of ethical labeling. We propose that consumers apply a *what-is-fair-is-good* heuristic to judge products' taste despite the fact that Fair Trade is a credence attribute meaning that it actually cannot directly be experienced through consumption (Poelman, Mojet, Lyon, & Sefa Dedeh, 2008) – a factor potentially unknown to consumers. However, as justice in general has been identified as a major motive in many studies involving emotional experience, attitude, or behavior we believe that Fair Trade imposes an influence on judgment. For example, people are willing to sacrifice money for justice (Fehr & Fischbacher, 2004), they react to unfairness by negative emotions such as moral outrage (Mikula, Scherer, & Aethenstaedt, 1998), and they develop negative attitudes towards transgressors. Further, concerns for fairness are the key driver regarding the judgment of socio-economic policy measures (Haferkamp, Fetchenhauer, Belschak, & Enste, 2009) and in the realms of marketing and pricing, fairness is a key influence on product perception as unfair prices decrease subjective product ratings (Martins & Monroe, 1994). Thus, in many domains of human action, justice serves an important driving force. Fair Trade also directly addresses people's concern for justice. It is used in virtually all kinds of consumer products stemming from third-world countries such as clothing, toys or jewelry. The area of foods and drinks, however, provide the most fertile testing grounds for a study of the influence of ethical labeling in consumer preference.

Research on the labeling effect has shown how people's perception is sometimes malleable and subject to subtle or explicit

influences which could be argued irrelevant for an actual preference-rating. This is, however, not limited to gustatory perception. In a broader context of visual perception Balcetis and Dunning (2006) showed how people tend to perceive ambiguous pictures in a favored way. In this case of motivated perception they argue for a top-down process at work, meaning that people sometimes perceive what they *want* to perceive and actually do so. In fact, much research has indicated the human sensory perception to be *jointly* shaped by top-down processes and bottom-up where experience shapes perception (Lee, Frederick, & Ariely, 2006).

In the current context, a top-down process means that motivation for justice shapes the evaluation of how the products tasted. We thus attempt to shed light on the question whether justice-related labeling also exposes an influence on consumer taste evaluation through a subtle motivation for fairness. Hence, we raise the key question if concerns for justice are sufficient for people to rate a product's taste higher.

Generally, we hypothesize that ethical labeling influences taste ratings positively. As soon as products are labeled as Fair Trade goods, participants should rate them higher due to a motivation to perceive fair better than conventional (i.e. *what-is-fair-is-good*), irrespective of a-priori attitudes about Fair Trade being better as well as pre-trial expectancies.

7.2. Experimental approach

In two experiments of the present study, respondents consumed either a piece of chocolate (experiment 1) or a cup of freshly brewed coffee (experiment 2). In both experiments, a 2 (*content* fair vs. conventional) x 2 (*label* fair vs. conventional) between-subjects-design was used to test our hypotheses.

To ensure that the products tasted similar in a blind test, we ran a pretest with 80 people, which indicated that neither chocolate nor

coffee tasted differently (scale 0-100: chocolate: M_{Fair}=68.25; SD=22.55) vs. $M_{Conventional}$=63.25; SD=18.73; t<1 and coffee: M_{Fair}=66.70; SD=20.95 vs. $M_{Conventional}$=70.40; SD=14.98; t<1).

In total, 461 participants (194 males, M_{age}=23, SD_{age}=3) were invited to the laboratory to participate in a study regarding the tasting of products. 241 tasted chocolate and 220 tasted coffee. In order to gain a higher credibility of our manipulations, our lab assistants prepared both coffee and chocolate in a way that subjects could take a sample out of the original container. Chocolate was consumed in little squares, coffee was consumed in a cup and freshly brewed by the subject using a *Philips Senseo* Coffee maker. Coffee consumers could add milk and sugar to meet their customs. In case of chocolate we had to use two different brands because in the German market no brand exists, which offers both Fair Trade and conventional chocolate. In case of coffee, the brand *Valentino* was used which provides exactly equal containers regarding their look in case of Fair Trade and conventional.

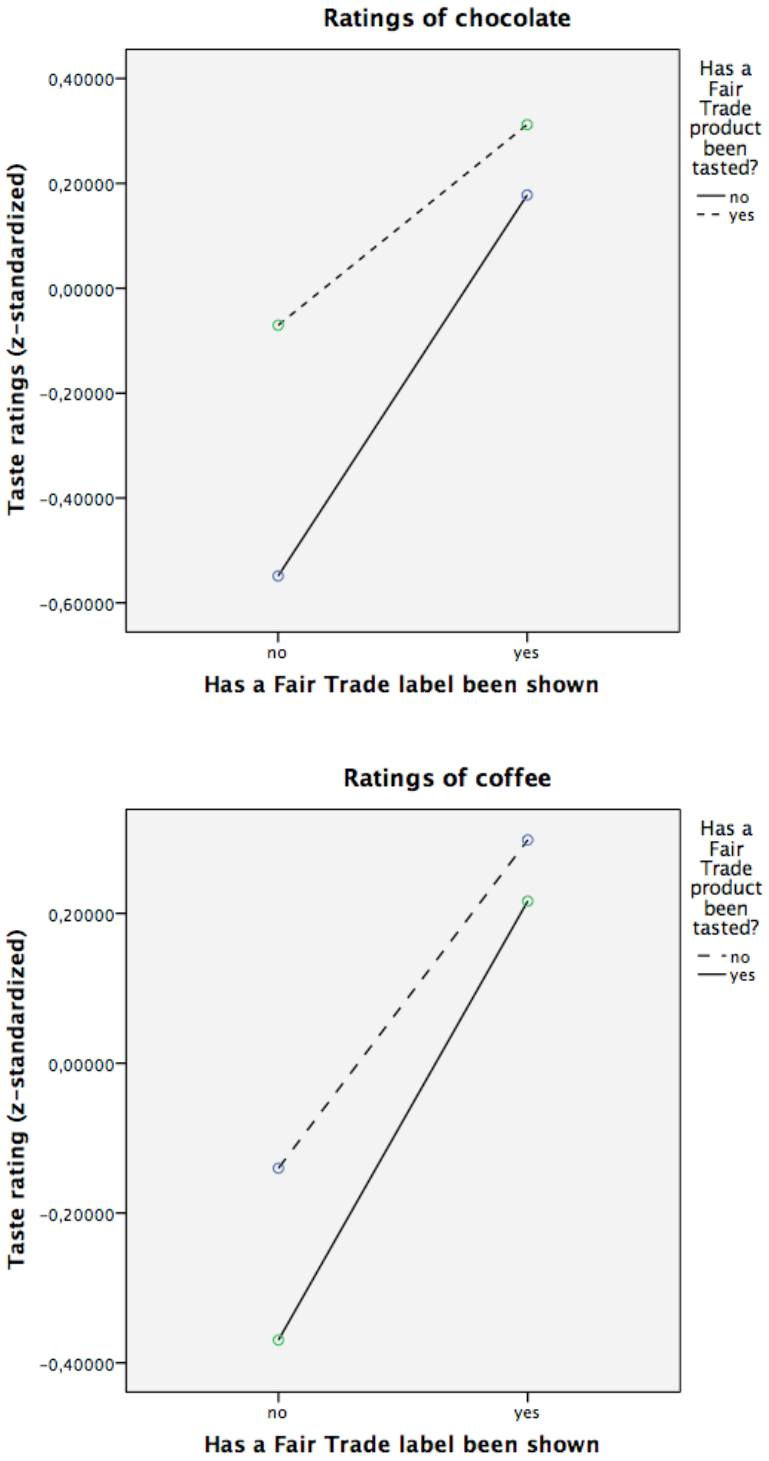
Before participants could actually get their hands on the products, they were asked to read instructions and to fill out a questionnaire. In the instructions, people ostensibly consuming Fair Trade learned what the label means by a brief explication about how Fair Trade works. In order to not attract attention to Fair Trade in particular all participants were asked various filler questions regarding consumption habits and attitudes to other things such as organic foods or consumption in general. Before actually preparing and tasting the products, participants were asked about their pre-trial expectancies indicating it on a scale from 1 (*very bad*) until 5 (*very good*). After some additional filler questions, the rating of the taste took place on a scale from 0 to 100.

7.3. Experimental results

The principal interest of this research in how consumers are influenced by the ethical label Fair Trade. We used univariate ANOVA to analyze the effects of the ethical product (fair vs. conventional) and the ethical label (fair vs. non-labeled).

Both experiments support the general hypothesis showing that the label significantly influences the taste evaluation of consumers' (see Figure 4). In case of chocolate, ANOVA shows a main effect of the label, $F(1, 237)=19.83$, $p<.001$, $\eta^2=.08$, $d= .53$ (medium effect). Contrarily to the pretest, an (although weaker) effect of the actual product was also identified, $F(1, 237)=6.00$, $p<.05$, $\eta^2=.03$, $d=.23$ (weak effect), but no effects for their interaction, $F(1, 237)=1.91$, $p=.17$. While chocolate without the label was rated at $M=65.94$ ($SD=21.21$) the chocolate labeled as fair was rated at $M=76.00$ ($SD=16.64$).

Figure 4: *Effects of the label and the actual product on taste ratings (z-standardized)*



In case of coffee, the effects of the Fair Trade label are similar: Again, ANOVA shows a main effect of the label, $F(1, 216)=15.32$, $p<.001$, $\eta^2=.07$, $d=.53$ (medium effect), but no effects for either the

actual product taste, $F(1, 216)=1.41$, $p=.24$, nor their interaction, $F(1, 216)=.03$, $p=.57$. Conventionally labeled coffee was rated at $M=63.43$ ($SD=20.04$) while coffee labeled as fair was rated $M=73.35$ ($SD=16.98$). Thus, subject responded to ethical labeling as incorporated by the Fair Trade-Label with significant better taste-ratings compared to conventionally products.

To analyze the effect of pre-trial expectancies, we tested for mediation using the causal steps approach suggested by Baron and Kenny (1986). The results suggest that partial mediation occurred for coffee, but not for chocolate. Sobel tests supported the results for both products ($Z_{chocolate}=1.24$, $p=.24$; $Z_{coffee}=2.67$, $p<.01$). Thus, there are mixed results indicating that at least some of the effects of the Fair Trade label are not due to quality expectancies.

To analyze the robustness of the Fair Trade label, we analyzed the effect more deeply for those who indicated an a-priori attitude that Fair Trade and conventional goods are equivalent. Across our sample, 78% of subjects indicated that no difference exists between Fair Trade and conventionally traded chocolate and coffee. Thus, showing the effect just for those who neglect the difference corroborates the theoretical consideration of alternative explanations of the labeling effect. And indeed, univariate ANOVA shows the hypothesized results for people explicitly stating that the Fair Trade does not taste better. In case of chocolate, ANOVA shows a main effect of the label, $F(1, 180)=14.30$, $p<.001$, $\eta^2=.07$ $d=.63$ (medium-strong effect). Similarly to above, a weaker effect of taste was also identified, $F(1, 180)=4.67$, $p<.05$, $\eta^2=.03$, $d=.22$ (weak effect), but no effects for their interaction, $F(1, 180)=1.56$, $p=.21$. While chocolate without the label was rated at $M=76.77$ ($SD=14.81$) the chocolate labeled as fair was rated at $M=67.64$ ($SD=20.43$).

In case of coffee, the label imposed a similar effect on consumers: Again, ANOVA shows a main effect of the label, $F(1, 166)=5.49$, $p<.05$, $\eta^2=.03$, $d=.34$ (weak-medium effect) but no effects for either the actual product tasted, $F(1, 166)=1.92$, $p=.19$, nor their

interaction, $F(1, 166)=.01$, $p=.97$ Coffee not labeled as fair was rated at $M=71.51$ ($SD=17.51$) while coffee labeled as fair was rated $M=65.12$ ($SD=19.50$). Thus, the above effects were replicated for those explicitly stating that Fair Trade does not differ. The Fair Trade label influenced ratings for both, chocolate and coffee, positively.

7.4. Discussion

The current research showed the existence of labeling effects of ethical labels in consumer goods. In two experiments involving the tasting of chocolate and coffee participants liked the product significantly better when they were presented as a Fair Trade product. Further, it was shown that pre-trial expectancies do not completely account for the effect. Thus, the effect demands an alternative explanation, for which we introduce the argument that consumers feel fair products to be good. This judgment is robust to the a-priori attitude that Fair Trade does not differ from conventional goods regarding quality. Even despite an original attitude that Fair Trade and conventional goods taste the same, the mere exposure to the label yields higher taste ratings.

Our results raise several additional questions. First, what might be the exact psychological processes driving this effect? We have argued that a top-down process affecting a motivation for justice is underlying taste judgments. Our results indicate that the labeling effect of Fair Trade is not anticipated since it is robust to the a-priori attitude that Fair Trade products should not taste better. Thus, as much of human perception is rather influenced by non-conscious processes (e.g. Bargh & Chartrand, 1999), perhaps also the justice motive non-consciously shapes taste ratings. It would be probably rather adverse for people to consciously like two identical products differently only through a dependence of the box the product comes in. However, the exact processes if and how the label (non-) consciously evokes the influences has to be left for further research.

Second, we address the incongruence of some research showing that ethical labels do not impose better taste ratings. Thus, potential differences in the experimental design have to be discussed. Critical to the current experiment was the between-subjects design. Our participants only received one product to taste. Other research using a within-subjects design (Grankvist, Lekedal, & Marmendal, 2007) was able to provide contrary evidence that consumer's actually rate taste experience equally when evaluating Fair Trade and conventional goods jointly (people tasted fruit juice in these cases). But why is that? When tasting only one product (our case) it is impossible to compare the taste to a benchmark. While it is easy for many people to compare products when jointly evaluating them, it is rather difficult to rate the taste of one product on an abstract scale alone besides whether it actually tastes good or bad. The fact that – at least objectively – both products probably taste decent makes this only harder. People generally tend to know if they like something rather than being able to quantify a preference for similar tasting goods. Our employed design matches real-world conditions since most people typically purchase one good and determine at home whether they like it or not.

Third, we address the question of the external validity of the results and their relevance in actual consumer decision-making. It is important to discuss how ethical labels might interact with other labels such as brand name or labels about organic production knowing that all are potentially influencing subjective experience. In case of an actual purchase decision, labels typically overwhelm consumers. Not even accounting for the variety in taste and quality, people are influenced by prices, country of origin, and brand name besides the information about the good being produced ethically. While some empirical evidence exists stating the relative importance of hard factors such as price (Olson, 1977) it has, to our knowledge, never been investigated how different "soft" cues (i.e. Fair Trade, organic etc.) perform compared to each other. Even though ethical

labels and the underlying justice motive are somewhat important for people's decision-making we acknowledge that indicators such as brand or country of origin serve as a stronger influence. However, this assertion is a question of empirical testing.

Summarizing the current research, both, people's gustatory sensation (Deliza & McFie, 1996) as well as their motivation for justice (Lerner, 1977) are two rather complex topics. It was shown how people's justice motive has the power to actually influences their *reported* gustatory sensation. By limiting our findings to *reported sensation* we want to leave open, whether the justice motive literally influences human chemoreceptors on the tongue or if that effect is just *biased* rating. Our prime interest by this research is not to encourage marketers to let people taste Fair Trade products in the supermarket to demand higher prices due the better taste. We rather wanted to show and encourage more research to examine how not only *concerns about the self* motivates people to see what they want to see (Balcetis & Dunning. 2005), but also that *concerns about others* determine that we taste what we want to taste – for example the taste of fairness.

8. General Discussion

8.1. Summary of Empirical Results

The current research was designed to shed light on justice-related perception and decision making in various domains. First justice related decision-making was discussed showing that individual differences in justice sensitivity are systematically associated to prosocial behavior in the social science lab. Justice sensitivity measures individual differences in how humans perceive situations and how strong their emotional and behavioral reaction to these situations is.

In Chapter 4 peoples' justice sensitivity was measured in order to predict their behavior in variations of the commonly known dictator game giving a better understanding of human prosocial behavior. In addition to the standard dictator game, people faced situations where it is harder to exploit another person for the sake of selfishness. In this case, the original endowment lay with this person and it was the decision-maker's task to take money away, thus merely reversing the property rights of the endowment. This was sufficient for people to take less money away than they demanded for themselves in the other conditions. In the other extreme, the decision-maker was ensured high degrees of privacy by the experimenter's assurance that receivers were led to believe that any received money stemmed from a lottery. This situational variation significantly influenced peoples' behavior. They became more selfish when the situation allowed them to.

However, people's justice sensitivity moderated prosocial behavior across situations in a way that those particularly high in prosocial facets of justice sensitivity left an equal amount (i.e. the fair share) to receivers' no matter what the circumstances were. Quite contrarily, people low in prosocial justice sensitivity highly exploited

the situations in order to pursue their material self-interest thus driving the main effect of the situational variation.

Subsequently in Chapter 5, psychological processes underlying justice-responses were analyzed in a more profound way. Closely matching the dictator game paradigm, the so-called third-party punishment game was used to learn about emotions involved in the willingness to punish unfair others and thus to use own resources for the re-establishment of justice. Also examining people's individual differences in justice sensitivity, it was found that people high in prosocial facets of justice sensitivity were significantly more willing to altruistically punish unfair actors who decided to claim the entire money of a dictator game to them. People's moral emotions – anger, disgust, and indignation – evoked by the transgression were the driving force of this behavior. Importantly, only people high in beneficiary-sensitivity punished more, because of their experience of moral emotions. In case of the mere opportunity to altruistically punish unfair others while ignoring other, potentially more fruitful justice-responses, this mediating relationship of moral emotions was not found for the observer-dimension.

In addition to the identification of moral emotions as driving forces of third-party punishment, the underlying reasons for non-action were explored. Hence, people were asked to give reasons why they hesitated to punish unfair others at own expenses. It turned out that justice sensitivity also provided an organizing pattern for defaulted punishment. While people relatively high in prosocial justice sensitivity (the remaining people who did not already punish) argued that they hesitated to punish due to ethical reasons (such as pun*ishment is per se bad* or *punishment is not as good as compensating the victim*) people high in justice-sensitivity from the victim perspective argued based on selfishness or rationality (for example by using arguments such as *it is not efficient*, *no one is helped by punishment*.

Taking some of the reasons provided by participants in the previous study, Chapter 6 of the dissertation re-visited third-person interventions using a version of the punishment-game but also involving an opportunity to compensate the victim besides punishing the perpetrator. Further, the subjective severity of the perpetration was varied. While in one condition third-party observers were told that victims attributed the offense on bad lottery draw (as in the private dictator game above), in the other condition they attributed the offense on a person (like in the standard dictator game above). The basic result is that people in general also rely on compensatory justice in addition to punitive responses to the injustice. Further, emotional correlates of either justice-response are distinct and dependent on subjective severity of the perpetration. In case of punishment, outward-focused emotions such as moral outrage lead to punitive responses independent of the subjective severity of the offense. This is a result closely matching the results of the previous chapter. In case of compensation, moral outrage explains behavior in both conditions while inward-focused emotions such as anxiety and fear are only an emotional antecedent of compensation when the victim is ostensibly aware of the transgression. Further, justice sensitivity from an observer's perspective significantly relates to emotional response as well as both types of behavior – a result, which at first sight differs qualitatively to some results of Chapter 5.

In a final empirical Chapter 7, the insight that justice affects people (emotionally and their behavior) was applied to a consumer psychological setting. Using the widely known ethical label Fair Trade it was shown, how the general concern for justice shapes human perception and how it can be applied in a real-context. The mere exposure of the Fair Trade label led people to judge the taste of chocolate and coffee better compared to (identical) samples without the Fair Trade label. It was argued that the justice-concerns serve as a top-down process shaping reported perception in addition to actual perception through a bottom-up process.

8.2. Integrative Discussion

Drawing from the experimental results, many of them are in line with theoretical considerations as well as sound compared to each other. Chapters 4, 5, and 6 consistently provide evidence how prosocial facets of the individual difference measure justice sensitivity are systematically connected to "positive" justice responses. By using the term "positive" justice responses I do not aim to lift the insights on a normative level. I rather claim that people high in these facets are reluctant to keep money to themselves when it is possible to do what naïvely can be called "just". Doing justice can, depending on the specific paradigm, be giving up money in the dictator game as well as giving up money to punish or compensate perpetrators and victims of unfair behavior in such. Chapter 7, although excluding the individual difference measure fits in the previous chapters by means of their general psychological insights. The chapter delivered the key result that reported perception is somewhat dependent on an abstract connotation of justice. Thus, the dissertation as a whole delivers insights how justice influences not only human behavior and emotional experience alone, but that it already "works" on human perception thus affecting all tangents of humans with their surroundings.

Besides the unifying aspects of this dissertation, a closer look at details of the findings raise the question of congruence. Especially one aspect needs further discussion. In Chapter 5, the results suggest that observer sensitivity did not relate to moral emotions and thus, moral emotions did not mediate between observer-sensitivity and altruistic punishment in the third-party punishment game. Contrarily, this result diverged in Chapter 6 where moral outrage significantly associated to observer-sensitivity as well as punitive and compensatory responses to the injustice. But why was that? First, it has to be stated that the measures of emotions were distinct. While in Chapter 5 a rather open measure was used (participants wrote a

statement not specifically asking for emotions but merely what was going on in their heads), Chapter 6 relied on the PANAS (Watson & Clark, 1988) and thus specifically asked about affect on a Likert-Scale. Further, we learned from participants that some were hesitant to punish and would rather have compensated. Observer-sensitivity significantly predicted the arguments used for defaulted punishment. In Chapter 6 the intervention options included compensation so that a broader spectrum of intervention could be realized. Thus, the two studies are hard to compare and it has to be left to further research how robust the findings are. Theoretically, the results do not contradict each other as mediation effects never accounted for all variance. Thus, it seems plausible that more mediators function between justice sensitivity and behavior, especially when such behavior includes several distinct options.

8.3. Focus of future research

The present research investigated several topics how concerns for justice affect human perception, emotional experience, and subsequent behavior. While the research addressed important aspects of social justice research, it also raised questions, which should be addressed by future research. The central topic of this dissertation was the action of independent third parties who observed deliberate transgressions by a perpetrator. These issues were surrounded by boundary conditions and determinants why unfair behavior takes place in the first place (see Chapter 4 including variations of the dictator game) and how concerns for justice can be applied in a consumer setting (Chapter 7). All of the discussed topics demand further research to examine the insights more thoroughly.

Regarding the direct actions of people in situations, which give opportunities to behave prosocially, social science delivers many insights. Yet there remains a dearth of empirical work aiming to answer significant questions. For example, it was found in Chapter 4 how individual differences in justice sensitivity bring more stability

into prosocial behavior. However, the important question how the found effects are stable not only across situations but also through time can be addressed by future research. In the presented studies as well as in much research people always distribute endowments, which were given virtually seconds before the demanded action. Interestingly to know is in particular if people are willing to give away money received quite some time ago and to determine the role justice sensitivity takes in this scenario. This would enable us to understand long-term behavior of people – incorporated for example by philanthropy.

Further, future research should investigate the exact conditions, under which humans thrive to engage in third-party interventions. It became clear that punishment is not always the preferred way of action when having to engage in third-party justice. Compensatory acts sometimes help to address – potentially different – ethical motives underlying intervention. But life is rarely as easy as in the laboratory. In real life, sometimes intentions and outcomes do not reflect each other. For example, an intended harm might, by accident, not induce a harmful consequence. Contrarily, a bad consequence might be the result of chance. In order to gain a better understanding of the underlying ethical motives of third parties' engaging, future research should disentangle intentions and outcomes to see if punishment and compensation truly reflect diverging ethical motives. Also, the "strategic" component of compensation needs to be further reflected. It may occur that people also compensate if the victim knows about that and, therefore, can acknowledge the action.

Further, future research needs to better explore boundary conditions of compensatory justice. For example, lifting compensatory acts to interactions between consumers and companies compensation might yield a new understanding of important issues. In recent research, Okimoto and Lotz (in progress) determine the role of compensation acts in the airline and hotel industry after

transgressions such as over-bookings or room-downgrades. Especially trust and the clarity of procedures might be important factors influencing the outcome-favorability of compensations to customers. Also, in the context of Fair Trade products, trust is an essential variable in the found relationship. As soon as consumers lack the belief that the increased cost of Fair Trade products is given to third world producers there is no chance that they are willing to purchase such goods at increased prices.

Summarizing, the area of prosocial behavior in second party justice as well as in compensatory justice involving third-party justice should be increasingly addressed by justice-researchers in the future. Especially experimental games seem – due to their high controllability and possibilities to disentangle motives – as a fertile breeding ground for new insights in the topic. The few ideas delivered here provide a basis of many questions to be answered empirically. As time progresses these answers are reached by means of different and innovative methodologies and empirical approaches – a topic which deserves some attention.

9. Outlook: Social Science in the next millennium – advances in methodology and integration of sciences

It is important to understand the current work in a greater picture of the study of human perception and behavior in order to reflect its relative importance and contribution to science. Topics in this dissertation included aspects of justice-related behavior in experimental decision tasks or consumer-related judgment. Many times it was pointed out how psychology and economics interact in the search for understanding human behavior. Specifically, many studies conducted – by psychologists as well as economists – were cited as the foundation of this dissertation. It was often argued that the work is inter-disciplinary in its nature and even though

psychological in its nature, (behavioral) economics heavily influenced this research, especially through the application of its experimental games.

However, the integration of sciences does not stop here. Increasingly, scientists from cognitive and brain sciences (Buckholtz et al., 2008; de Quervain et al, 2004), as well as genetics researchers and medical researchers (Kluger et al., 2002; Munafo et al., 2008, 2008; Risch et al., 2009) are gaining interest in topics traditionally focused on by social scientists. This interest stems from the fundamental questions about what our common humanity separates us from other species. Thus, a special interest that is shared between psychologists, economists, and "natural scientists" is why and under what circumstances prosocial behavior can be observed in human behavior. Here, it shall be briefly discussed, how this integration works and where it may lead. It is focused on topics important to this dissertation – personality and emotions as determinants of decisions in justice-related (social) issues.

9.1. Genetics and individual differences in social behavior

Originating from twin and family studies several researchers have shown that justice-related action such as other-regarding behavior, cooperation and trust are partially hardwired meaning that humans possess specific genetic structures to engage in such behavior (Ebstein, Israel, Chew, Zhong, & Knafo; 2010). In the past two decades, the genetics of personality was a blooming field of research (Ebstein, 2006; Kluger et al., 2002; Munafo et al., 2008, 2008; Risch et al., 2009). Only recently, genetics research has also been addressed in experimental games (Dreber, Apicella, & Eisenberg, 2009; Israel et al., 2009; Knafo et al., 2008; Kuhnen and Chiao, 2009; Zhong et al., 2009a, 2009b), sometimes even in combination with brain imaging (Buckholtz et al., 2008, Fehr & Camerer, 2007).

Neurogenetic research seems to suggest especially the neuropeptides oxytocin (OT) and arginine vasopressine (AVP) to associate to human social behavior. In experiments involving genetic or neural correlates of behavior in dictator games, ultimatum games, and the trust game, OT and AVP has been shown to partially explain variance (Ebstein et al., 2010). Also, social value orientations (van Lange, 1997) were associated to the two neuropeptides (Knafo et al., 2008). These results suggest that justice sensitivity, which is related to behavior in games as well as social-value orientations might be associated similarly. Thus, the genetic underpinning of justice sensitivity and, subsequently, the relation to behavior in controlled experimental games seems a fruitful area of conduct.

9.2. Physiological measures of emotions

This research included several methods of emotions such as an open measure submitted to qualitative analysis (Chapter 5) or the traditional measure of PANAS (Watson & Clark, 1988; Chapter 6). However, scientists have introduced other measures as well – physiological measurement tools to subtly measure the emotions of study participants. When physiological measures are discussed in emotion-research, typically skin-conductance-level (SCL) is monitored. Also, in experimental games SCL-research was prominently used (Ben-Shakar, Bornstein, Hopfensitz, & van Winden, 2007) to predict behavior in the power-to-take game, which is an augmentation of the standard ultimatum-game. By also using self-report measures of emotion (see also Bosman & van Winden, 2002) closely matching the PANAS (Watson & Clark, 1988) it was observed that the two measures of emotions closely related to each other. Thus, qualitatively, it does not make a big difference whether emotions are measured “classically” by the means of self-report-measures of “modern” by the means of fancy physiological measures. The main argument of researchers arguing for physiological measures include the cognitive aspect of self-report measures meaning that

people have to think about how they feel in order to report they emotion on a scale. Additionally, self-report measures elicit "demand-effects" (i.e. should a participant feel this emotion in this situation). However, for example some authors (Schlösser, Dunning, & Fetchenhauer, 2010; Schlösser, Fetchenhauer, & Dunning; 2010) showed elegantly how these problems could be circumvented using Self-Assessment-Manikins (Fischer, Brauns, & Belschak, 2002). The downside of physiological measures, contrarily, are fairly obvious and include difficult study logistics, associated costs as well as the lack of distinction in specific emotions, which especially the findings of chapter 6 showed to be of immense importance in the understanding of prosocial behavior.

9.3. Natural sciences – the new social science?

The previous considerations pointed to an increasing importance of "natural sciences" in traditional areas of social science. And truly, social scientist have gained a whole new interest in combining their methods with other "hard sciences" such as molecular biology, genetics, or neuroscience. But why is that? When talking about social science, economics and political science are more recently exploring these new methods of conduct while others, such as psychology have relied on them much longer – especially in non-social contexts such as personality and clinical research. What seems to be puzzling now is that the study of human concerns for justice, cooperation and trust is now a shared interest between psychologists and behavioral economists on the one side and genetics, medical and neurological researcher on the other side.

However, based on the review of articles the evidence from natural scientists helps to understand human behavior but this research has shown that "traditional" methods, which combine psychological and economic tool are still very applicable because they efficiently gain insights in human perception, motivation and behavior. Especially in the justice domain there is still much to learn.

9.4. Closing – stability vs. fragility of fairness

This dissertation addressed several justice related situations delivering insights into how people make decisions and about what people feel and think before and after making such. Further, it was shown how justice sometimes subtly influences us – with as little necessary as a label on a product.

Specifically, fairness in human action was shown to be profoundly *stable* in many domains. For example, people with particular high degrees of prosocial justice sensitivity seem to be immune to little tricks and manipulation imposed by the experiments shown here. They behave fair no matter what. Yet contrarily, people without high degrees of the trait fell prey to what we did showing how equally *fragile* fairness sometimes is. The findings were extended to situations reflecting social courage – be it by means of punishing offenders or compensating victims. Again, social courage was sometimes immune to twists such as the victim's felt victimization while sometimes not. In total, this dissertation has answered some questions towards our understanding of justice. However, it has raised equally many thus opening grounds for much more research in the area. In science as in real life, especially the small things that influence us in our fair or unfair behavior are potentially of big importance – yet this is a thought, which has been around quite a while.

> In matters of truth and justice, there is no difference between large and small problems, for issues concerning the treatment of people are all the same.
>
> ALBERT EINSTEIN

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11. Appendix

People react quite differently in unfair situations. How about you? First, we will look at situations to the advantage of others and to your own disadvantage.

1. It bothers me when others receive something that ought to be mine.
2. It makes me angry when others receive a reward that I have earned.
3. I cannot easily bear it when others profit unilaterally from me.
4. It takes me a long time to forget when I have to fix others' carelessness.
5. It gets me down when I get fewer opportunities than others to develop my skills.
6. It makes me angry when others are undeservingly better off than me.
7. It worries me when I have to work hard for things that come easily to others.
8. I ruminate for a long time when other people are treated better than me.
9. It burdens me to be criticized for things that are overlooked with others.
10. It makes me angry when I am treated worse than others.

Now, we will look at situations in which you notice or learn that someone else is being treated unfairly, put at a disadvantage, or used.

11. It bothers me when someone gets something they don't deserve.
12. I am upset when someone does not get a reward he/she has earned.
13. I cannot easily bear it when someone unilaterally profits from others.
14. It takes me a long time to forget when someone else has to fix others' carelessness.
15. It disturbs me when someone receives fewer opportunities to develop his/her skills than others.
16. I am upset when someone is undeservingly worse off than others.
17. It worries me when someone has to work hard for things that come easily to others.
18. I ruminate for a long time when someone is treated nicer than others for no reason.
19. It gets me down to see someone criticized for things that are overlooked with others.
20. I am upset when someone is treated worse than others.

Now, we will look at situations that turn out to your advantage and to the disadvantage of others.

21. It disturbs me when I receive what others ought to have.
22. I have a bad conscience when I receive a reward that someone else has earned.
23. I cannot easily bear it to unilaterally profit from others.
24. It takes me a long time to forget when others have to fix my carelessness.
25. It disturbs me when I receive more opportunities than others to develop my skills.
26. I feel guilty when I am better off than others for no reason.
27. It bothers me when things come easily to me that others have to work hard for.
28. I ruminate for a long time about being treated nicer than others for no reason.
29. It bothers me when someone tolerates things with me that other people are being criticized for.

30. I feel guilty when I receive better treatment than others.

Finally, we will look at situations in which you treat someone else unfairly,
discriminate against someone, or exploit someone.
Not at all Exactly

31. It gets me down when I take something from someone else that I don't deserve.
32. I have a bad conscience when I deny someone the acknowledgment he or she deserves.
33. I cannot stand the feeling of exploiting someone.
34. It takes me a long time to forget when I allow myself to be careless at the expense of someone else.
35. It disturbs me when I take away from someone else the possibility of developing his or her potential.
36. I feel guilty when I enrich myself at the cost of others.
37. It bothers me when I use tricks to achieve something while others have to struggle for it.
38. I ruminate for a long time when I treat someone less friendly than others without a reason.
39. I have a bad conscience when I criticize someone for things I tolerate in others.
40. I feel guilty when I treat someone worse than others 0 1 2 3 4 5

Note: Items 1 through 10 measure victim sensitivity, 11 through 20 measure observer sensitivity, 21 through 30 measure beneficiary sensitivity, and 31 through 40 measure perpetrator sensitivity. Based on feedback from English native speakers, the wording of the victim, observer, and beneficiary sensitivity items was changed slightly compared to Schmitt et al. (2005).